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SOME ASPECTS OF ANIMAL MECHANISM*

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IT IS sometimes said that science lives too much in itself, but once a year it tries to remove that reproach. The British Association meeting is that annual occasion, with its opportunity of talking in wider gatherings about scientific questions and findings. Often the answers are tentative. Commonly questions most difficult are those that can be quite briefly put. Thus: "Is the living organism a machine?" "Is life the running of a mechanism?" The answer cannot certainly be as short as the question. But let us, in the hour before us, examine some of the points it raises.

Of course for us the problem is not the "why" of the living organism, but the "how" of its working. If we put before ourselves some aspects of this working, we may judge some, at least, of the contents of the question. It might be thought that the problem is presented at its simplest in the simplest forms of life. Yet it is in certain aspects more seizable in complex animals than it is in simpler forms.

Our own body is full of exquisite mechanism. Many exemplifications could be chosen. There is the mechanism by which the general complex internal medium, the blood, is kept relatively constant in its chemical reaction, despite the variety of the food replenishing it and the fluctuating draft from and input into it from various organs and tissues. In this mechan-

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ism the kidney cells and the lung cells form two of the main sub-mechanisms. One part of the latter is the delicate mechanism linking the condition of the air at the bottom of the lungs with that particular part of the nervous system which manages the ventilation of the lungs. On that ventilation depends the proper respiratory condition of the blood. The nervous center that manages the rhythmic breathing of the chest is so responsive to the respiratory state of the blood supplied to itself that, as shown by Drs. Haldane and Priestley some years ago, the very slightest increase in the partial pressure of carbon dioxide at the bottom of the lungs at once suitably increases the ventilation of the chest. Dovetailed in with this mechanism is yet another working for adjustment in the same direction. As the lung is stretched by each in-breath, the respiratory condition of the nervous center, already attuned to the respiratory quality of the air in the lungs, sets the degree to which inspiration shall fill them ere there ensue the opposite movement of outbreak. All this regulation, although the nervous system takes part in it, is a mechanism outside our consciousness. Part of it is operated chemically; part of it is reflex reaction to a stimulus of mechanical kind, though as such unperceived. The example taken has been nervous mechanism. If, in the short time at our disposal, we confine our examples to the nervous system, we shall have the advantage that in one respect that system presents our problem possibly at its fullest.

Let us turn, therefore, to another example, mainly nervous. Muscles execute our movements; they also maintain our postures. This postural action of muscles is produced by nerve centers that form a system more or less their own. One posture of great importance thus maintained is that of standing, the erect posture. This involves due coöperation of many separate muscles in many parts. Even in the absence of those portions of the brain to which consciousness is adjunct, the lower nerve centers successfully bring about and maintain the coöperation of muscles that results in the erect posture; for example, the animal in this condition, if set on its feet, stands. It stands reflexly; more than that, it adjusts its standing posture to required conditions. If the pose of one of the limbs be shifted, a compensatory shift in the other limbs is induced,

so that stability is retained. A turn of the creature's neck sidewise, and the body and limbs, of themselves, take up a fresh attitude appropriate to the side-turned head. Each particular pose of the neck telegraphs off to the limbs and body a particular posture required from them, and that posture is then maintained so long as the neck posture is maintained. Stoop the creature's neck, and the forelimbs bend down as if to seek something on the floor. Tilt the muzzle upward, and the forelimbs straighten and the hind limbs crouch as if to look at something on a shelf. Purely reflex mechanism provides all kinds of ordinary postures.

Mere reflex action provides these harmonies of posture. The nerve centers evoke for this purpose in the required muscles a mild, steady contraction, with tension largely independent of the muscle length and little susceptible to fatigue. Nerve fibers run from muscle to nerve center, and by these each change in tension or length of the muscle is reported to the activating nerve center. They say, "Tension rising, you must slacken", or conversely. There are also organs the stimulation of which changes with any change of their relation to the line of gravity. Thus, a pair of tiny water-filled bags is set one in each side of the skull and in each is a patch of cells endowed with a special nerve. Attached to hairlets of these cells is a tiny crystalline stone the pressure of which acts as a stimulus through them to the nerve. The nerve of each gravity bag connects, through chains of nerve centers, with the muscles of all the limbs and of one side of the neck. In the ordinary erect posture of the head, the stimulation by the two bags right and left is equal, because the two gravity stones then lie symmetrically. The result, then, is a symmetrical muscular effect on the two sides of the body—namely, the normal erect posture. But the right and left bags are mirror pictures of each other. If the head incline to one side, the resulting slip, microscopic though it be, of the two stones on their nerve patches makes the stimulation unequal. From that slip there results exactly the right unsymmetrical action of the muscles to give the unsymmetrical pose of limbs and neck required for stability. That is the mechanism dealing with limbs and trunk and neck. An additional one postures the head itself on the neck. A second pair of tiny gravity

bags, in which the stones hang rather than press, are utilized. These, when any cause inclining the head has passed, bring the head back at once to the normal symmetry of the erect posture. These same bags also manage the posturing of the eyes. The eye contributes to our orientation in space—for example, to perception of the vertical. For this the eyeball—that is, the retina—has to be postured normally, and the pair of little gravity bags in the skull, which serve to restore the head posture, act also on the eyeball muscles. Whichever way the head turns, slopes, or is tilted, they adjust the eyeball's posture compensatingly, so that the retina still looks out upon its world from an approximately normal posture, retaining its old verticals and horizontals. As the head twists to the right, the eyeball's visual axis untwists from the right. These reactions of head, eyes, and body unconsciously take place when a bird wheels or slants in flight or a pilot stalls or banks his aëroplane; and all this works itself involuntarily as a pure mechanism.

True, in such a glimpse of mechanism, what we see mainly is how the machinery starts and what finally comes out of it; of the intermediate elements of the process we know less. Each insight into mechanism reveals more mechanism still to know. Thus, scarcely was the animal's energy balance in its bearing upon food intake shown comfortably to conform with thermodynamics than came evidence of the so-called "vitamins"—evidence showing an unsuspected influence on nutrition by elements of diet taken in quantities so small as to make their mere calorie value quite negligible; thus, for the growing rat, to quote Professor Harden, a quantity of vitamin A of the order of one five-hundredths milligram a day has potent effect. Again, as regards sex determination, the valued discovery of a visible distinction between the nuclear threads of male and female brings the further complexity that, in such cases, sex extends throughout the whole body to every dividing cell. Again, the association of hereditary unit factors, such as body color or shape of wing, to visible details in the segmenting nucleus seemed to simplify by epitomizing. But further insight tends to trace the inherited unit character not to the chromosome itself, but to balance of action between the chromosome group. As with the atom in this heroic age of

physicists, the elementary unit once assumed simple proves, under further analysis, to be itself complex. Analysis opens a vista of further analysis required. Knowledge of muscle contraction has, from the work of Fletcher and Hopkins on to Hill, Hartree, Meyerhof, and others, advanced recently more than in many decades heretofore. The engineer would find it difficult to make a motive machine out of white of egg, some dissolved salts, and thin membrane. Yet this is practically what nature has done in muscle, and obtained a machine of high mechanical efficiency. Perhaps human ingenuity can learn from it. One feature in the device is alternate development and removal of acidity. The cycle of contraction and relaxation is traced to the production of lactic acid from glycogen and its neutralization chiefly by alkaline proteins; and physically to an admirably direct transition from chemical to mechanical effect. What new steps of mechanism all this now opens!

But knowledge, while making for complexity, makes also for simplification. There seems promise of simplification of the mechanism of reflex action. Reflex action with surprising nicety calls into play just the appropriate muscles, and adjusts them in time and in the suitable grading of their strength of pull. The moderating as well as the driving of muscles is involved. Also, the muscles have to pass from the behest of one stimulus to that of another, even though the former stimulus still persist. For these gradings, coadjustments, restraints, and shifts, various separate kinds of mechanism were assumed to exist in the nerve centers, although of the nature of such mechanisms little could be said. Their processes were regarded as peculiar to the nerve centers and different from anything that the simple fibers of nerve trunks outside the centers can produce. We owe to Lucas and Adrian the demonstration that, without any nerve center whatever, an excised nerve trunk with its muscle attached can be brought to yield, besides conduction of nerve impulses, the grading of them. That is remarkable, because the impulse is not gradable by grading the strength of the stimulus. The energy of the impulse comes not from the stimulus, but from the fiber itself. Lucas and Adrian have shown, however, that it is gradable in another way. Though the nerve impulse is a very

brief affair—it lasts about one-thousandth of a second at any one point of the nerve—it leaves behind it in the nerve fiber a short phase during which the fiber cannot develop a second impulse. Then follows rapid, but gradual recovery of the strength of impulse obtainable from the fiber. That recovery may swing past normal to supernormal before returning finally to the old resting state. Hence, by appropriately timing the arrival of a second impulse after a first, that second impulse may be extinguished, reduced, increased, or transmitted without alteration. This property of grading impulses promises a complete key to reflex action if taken along with one other. The nervous system, including its centers, consists of nothing but chains of cells and fibers. In these chains the junctions of the links appear to be points across which a large impulse can pass, though a weak one will fail. At these points the grading of impulses by the interference process just outlined can lead, therefore, to narrowing or widening their further distribution, much as in a railway system the traffic can be blocked or forwarded, condensed or scattered. Thus the distribution and quantity of the muscular effect can be regulated and shifted, not only from one muscle to another, but in one and the same muscle it can be graded by adding to or subtracting from the number of fibers activated within that muscle. As pointed out by Professor Alexander Forbes, it may be, therefore, that the nerve impulse is the one and only reaction throughout the whole nervous system, central and peripheral—trains of impulses colliding and overrunning as they travel along the conductive network. In this may lie the secret of the coördination of reflexes. The nerve center seems nothing more than a meeting place of nerve fibers, its properties but those of impulses in combination. Fuller knowledge of the mechanism of the nervous impulse, many of the physical properties of which are now known—a reaction that can be studied in the simplest units of the nervous system—thus leads to a view of nervous function throughout the system much simpler than formerly obtained.

Yet for some aspects of nervous mechanism the nerve impulse offers little or no clue. The fibers of nerve trunks are, perhaps, of all nerve structures those that are best known. They constitute, for example, the motor nerves of muscle and

the sensory nerves of the skin. They establish their ties with muscle and skin during embryonic life and maintain them practically unaltered throughout the individual's existence, growing no further. If severed, say, by a wound, they die for their whole length between the point of severance and the muscle or skin they go to. Then at once the cut ends of the nerve fibers start regrowing from the point of severance, although for years they have given no sign of growth. The fiber, so to say, tries to grow out to reach to its old far-distant muscle. There are difficulties in its way. A multitude of non-nervous repair cells growing in the wound spin scar tissue across the new fiber's path. Between these alien cells the new nerve fiber threads a tortuous way, avoiding and never joining any of them. This obstruction it may take many days to traverse. Then it reaches a region where the sheath cells of the old dead nerve fibers lie altered beyond ordinary recognition. But the growing fiber recognizes them. It joints them and, tunneling through endless chains of them, arrives finally, after weeks or months, at the wasted muscle fibers that seem to have been its goal, for it connects with them at once. It pierces their covering membranes and reforms with their substance junctions of characteristic pattern resembling the original that died weeks or months before. Then its growth ceases, abruptly, as it began, and the wasted muscle recovers and the lost function is restored.

Can we trace the causes of this beneficent, yet so unaccountable reaction? How is it that severance can start the nerve regrowing? How does the nerve fiber find its lost muscle microscopically miles away? What is that mechanism that drives and guides it? Is it a chemotaxis, like that of the antherozoid in the botanical experiment drawn towards the focus of the dissolved malic acid? If so, there must be a marvelously arranged play of intricate sequences of chemically attractive and repellent substances dissolved suitably point to point along the tissue. It has recently been stated that the nerve fiber growing from a nerve cell in a nutrient field of graded electrical potential grows strictly by the axis of the gradient. Some argue for the existence of such potential gradients in the growing organism. Certainly nerve regeneration seems a return to the original phase of growth,

and pieces of adult tissue removed from the body to artificial nutrient media in the laboratory take on vigorous growth. Professor Champy describes how epithelium that in the body is not growing, when thus removed, starts growing. If freed from all fibrous tissue, its cells not only germinate, but, as they do so, lose their adult specialization. In nerve regeneration the nerve-sheath cells, and to some extent the muscle cells that have lost their nerve fiber, lose likewise their specialized form, and regain it only after touch with the nerve cell has been re-established. So similarly epithelium and its connective tissue, cultivated outside the body together, both grow and both retain their specialization. The evidence seems to show that the mutual touch between the several cells of the body is decisive of much in their individual shaping and destiny. The severance of a nerve fiber is an instance of the dislocation of such a touch. It recalls well-known experiments on the segmenting egg. Destruction of one of the two halves produced by the first segmentation of the egg results in a whole embryo from the remaining half egg; but if the two blastomeres, though ligated, be left side by side, each then produces a half embryo. Each half egg *can* yield a whole embryo, but is restrained by the presence of the twin cell to yielding but a half embryo. The nerve severance seems to break a mutual connection which restrained cell growth and maintained cell differentiation.

It may be said that the nerve-sheath cells degrade because the absence of transmission of nerve impulses leaves their fiber functionless. But they do not degrade in the central nerve piece, although impulses no longer pass along the afferent fibers. This mechanism of reconstruction seems strangely detached from any direct performance of function. The sprouting nerve fibers of a motor nerve with impulses for muscular contraction can by misadventure take their way to denervated skin instead of muscle. They find the skin cells the nerve fibers of which have been lost, and on these they bud out twigs, as true sensory fibers would do. Then, seemingly satisfied by so doing, they desist from further growth. The sense cells, too, after this misunion, regain their normal features. But this joining of motor nerve fiber with sense cell is functionless, and must be so because the directions of

functional condition of the two are incompatible. Similarly a regenerating skin nerve, led down to muscle, makes its union with muscle instead of skin, though the union is a functional misfit and cannot subserve function. Marvelous though nerve regeneration be, its mechanism seems blind. Its vehemence is just as great after amputation, when the parts lost can of course never be rereached. Its blindness is sadly evident in the suffering caused by the useless nerve sprouts entangled in the scar of a healing or healed limb stump.

There is a great difference, however, between the growth of such regeneration and the growth impulse in pieces of tissue isolated from the body and grown in media outside. With pure cultures, in the latter case, Professor Champy says the growth recalls in several features that of malignant tumors—for example, multiplication of cells unaccompanied by formation of a specialized adult tissue. A piece of kidney cultivated outside the body dedifferentiates, to use his term, into a growing mass unorganized for renal function. But with connective-tissue cells added, even breast cancer epithelium will in cultivation grow in glandular form. New ground is being broken in the experimental control of tissue growth. The report of the Imperial Cancer Research Fund mentions that in cultivation outside the body malignant cells present a difficulty that normal cells do not. To the malignant cells the nutrient soil has to be renewed more frequently, because they seem rapidly to make the soil in which they grow poisonous to themselves, though not to normal cells. The following of all clues of difference between the mechanism of malignant growth and of normal is fraught with importance which may be practical as well as theoretical.

The regenerating nerve rebuilds to a plan that spells for future function, but throughout all its steps prior to the time when it actually reaches the muscle or skin, no actual performance of nerve function can take place. What is constructed is functionally useless until the whole is complete. So similarly with much of the construction of the embryo in the womb for purposes of a different life after emergence from the womb: of the lung for air breathing after birth; of the reflex contraction in the fetal child of the eyelids to protect the eye long before the two eyelids have been separated,

let alone ere hurt or even light can reach it; of the butterfly's wing within the chrysalis for future flight. The nervous system in its repair, as in its original growth, shows us a mechanism working through phases of non-functioning preparation in order to forestall and meet a future function. It is a mechanism against the seeming prescience of which is to be set its fallibility and its limitations. The "how" of its working is at present chiefly traceable to us in the steps of its results rather than in comprehension of its intimate reactions; as to its mechanism, perhaps the point of chief import for us here is that those who are closest students of it still regard it as a mechanism. If "to know" be "to know the causes", we must confess to want of knowledge of how its mechanism is contrived.

If we knew the whole "how" of the production of the body from egg to adult, and if we admit that every item of its organic machinery runs on physical and chemical rules as completely as do inorganic systems, will the living animal present no other problematical aspect? The dog, our household friend—do we exhaust its aspects if, in assessing its sum total, we omit its mind? A merely reflex pet would give little pleasure even to the fondest of us. True, our acquaintance with other mind than our own can be only by inference. We may even hold that mind as an object of study does not come under the rubric of natural science at all. But this association has its section of psychology, and my theme of to-night was chosen partly at the suggestion of a late member of it, Dr. Rivers, the loss of whom we all deplore. As a biologist, he viewed mind as a biological factor. Keeping mind and body apart for certain analytic purposes must not allow us to forget their being set together when we assess as a whole even a single animal life.

Taking as manifestations of mind those ordinarily received as such, mind does not seem to attach to life, however complex, where there is no nervous system, nor even where that system, though present, is little developed. Mind becomes more recognizable, the more the nerve system is developed; hence the difficulty of the twilit emergence of mind from no mind, which is repeated even in the individual life history. In the nervous system there is what is termed localization

of function—relegation of different work to the system's different parts. This localization shows mentality, in the usual acceptation of that term, not distributed broadcast throughout the nervous system, but restricted to certain portions of it—for example, among vertebrates to what is called the forebrain, and in higher vertebrates to the relatively newer parts of that forebrain. Its chief, perhaps its sole, seat is a comparatively modern nervous structure superposed on the non-mental and more ancient other nervous parts. The so-to-say mental portion of the system is placed so that its commerce with the body and the external world occurs only through the archaic non-mental remainder of the system. Simple nerve impulses, their summations and interferences, seem the one uniform office of the nerve system in its non-mental aspect. To pass from a nerve impulse to a psychical event—a sense impression, percept, or emotion—is, as it were, to step from one world to another and incommensurable one. We might expect, then, that at the places of transition from its non-mental to its mental regions the brain would exhibit some striking change of structure. But it is not so; in the mental parts of the brain there is nothing but the same old structural elements, set end to end, suggesting the one function of the transmission and collision of nerve impulses. The structural interconnections are richer, but that is merely a quantitative change.

I do not want, and do not need, to stress our inability at present to deal with mental actions in terms of nervous actions, or *vice versa*. Facing the relation borne in upon us as existent between them, however, may we not gain some further appreciation of it by reminding ourselves even briefly of certain points of contact between the two? Familiar as such points are, I will mention rather than dwell upon them.

One is the so-called expression of the emotions. The mental reaction of an emotion is accompanied by a nervous discharge that is more or less characteristic for each several type of emotion, so that the emotion can be read from its bodily expression. This nervous discharge is involuntary, and can affect organs, such as the heart, which the will cannot reach. Then there is the circumstance that the peculiar ways and tricks of the nervous machinery as revealed to us in the study

of mere reflex reactions repeat themselves obviously in the working of the machinery to which mental actions are adjunct. The phenomenon of fatigue is common to both, and imposes similar disabilities on both. Nervous exhaustion and mental exhaustion mingle. Then, as offset against this disability, there exists in both the amenability to habit formation, mere repetition within limits rendering a reaction easier and readier. Then, and akin to this, is the oft-remarked trend in both for a reaction to leave behind itself a trace, an engram, a memory, the reflex engram and the mental memory.

How should inertia and momentum affect non-material reactions? Quick though nervous reactions are, there is always easily observed delay between delivery of stimulus and appearance of the nervous end effect; and there is always the character that a reaction once set in motion does not cease very promptly. Just the same order of lag and overrun, of want of dead-beat character, is met in sense reactions. The sensation outlives the light that evoked it, and the stronger the reaction, the longer the sensation persists. Similarly the reflex after-discharge persists after the stimulus is withdrawn and subsides more slowly the stronger the reaction. The times in both are of the same order. Again, a reflex act that contracts one muscle commonly relaxes another. Even so, with rise of sensation in one part of the visual field commonly occurs lapse of sensation in another. The stoppage is in both by inhibition—that is to say, active. Then again, two lights of opposite colors falling simultaneously and correspondingly on the two retinae will, according to their balance, fuse to an intermediate tint or seesaw back and forth between the one tint and the other. Similarly a muscle impelled by two reflexes, one tending to contract it, the other to relax it, will, according to the balance of the reflexes, respond steadily with an intensity that is a compromise between the two, or seesaw rhythmically from extreme to extreme of the two opposite influences.

Reflex acts commonly predispose to their opposites; thus the visual impression of one color predisposes to that of its opposite. Again, the *position* of the stimulated sensual point acts on the mind—hence the light seen or the pain felt is referred to some locus in the mind's space system. Similarly

the reflex machinery directs, for example, the limb it moves toward the particular spot stimulated. Such spots in the two processes, mental and non-mental, correspond.

Characteristic of the nervous machinery is its arrangement in what Hughlings Jackson called "levels", the higher levels standing to the lower not only as drivers, but also as restrainers. Hence, in disease, underaction of one sort is accompanied by overaction of another. Thus in the arm affected by a cerebral stroke, besides loss of willed—that is, higher-level—power in the finger muscles, there is in other muscles involuntary overaction owing to escape of lower centers from control by the higher that have been destroyed. Similarly with the sensory effects; of skin sensations some are painful and some not—for example, touch. The seat of the latter is of higher level, cortical; of the former, lower, sub-cortical. When cerebral disease breaks the path between the higher and the underlying level, a result is impairment of touch sensation, but a heightening of pain sensation in the affected part. The sensation of touch, as Dr. Head says, restrains that of pain.

Thus features of nervous working resemble over and over again mental activities. Is it mere metaphor, then, when we speak of mental attitudes as well as bodily? Is it mere analogy to liken the warped attitude of the mind in a psychoneurotic sufferer to the warped attitude of the body constrained by an internal potential pain? Again, some mental events seem spontaneous; in the nervous system some impulses seem generated automatically from within.

It may be said of all these similarities of time relation and the rest between the ways of the nervous system and such simpler ways of mind as I here venture on that they exist because the operations of the mental part of the nervous system communicate with the exterior only through the non-mental part as gateway, and that there the features of the nerve machinery are impressed on the mind's working. But that suggestion does not take into account the fact that the higher and more complex the mental process, the longer the time lag, the more incident the fatigue, the more striking the memory character, and so on.

All this similarity does but render more succinct the old enigma as to the nexus between nerve impulse and mental

event. In the proof that the working of the animal mechanism conforms with the first law of thermodynamics, is it possible to say that psychical events are evaluated in the balance sheet drawn up? On the other hand, Mr. Barcroft and his fellow observers, in their recent physiological exploration of life on the Andes at 14,200 feet, noted that their arithmetic as well as their muscles was at a disadvantage; the low oxygen pressure militated against both. Indeed, we all know that a few minutes without oxygen, or few more with chloroform, and the psychical and the nervous events will lapse together. The nexus between the two sets of events is strict, but for comprehension of its nature we still require, it seems, comprehension of the unsolved mystery of the "how" of life itself. A shadowy bridge between them may lie, perhaps, in the reflection that for the observer himself the physical phenomena he observes are in the last resort psychical.

The practical man has to accept nervous function as a condition for mental function without concerning himself about ignorance of their connection. We know that with structural derangement or destruction of certain parts of the brain goes mental derangement or defect, while derangement or destruction of other parts of the nervous system is not so accompanied. Decade by decade the connection between certain mental performances and certain cerebral regions becomes more definite. Certain impairments of ideation as shown by forms of incomprehension of language or of familiar objects can help to diagnose for the surgeon that part of the brain which is being compressed by a tumor and, the tumor gone, the mental disabilities pass. Similarly those who, like Professor Elliot Smith and Sir Arthur Keith, recast the shape of the cerebrum from the cranial remains of prehistoric man can outline for us something of his mentality from examination of the relative development of the several brain regions, using a true and scientific phrenology.

Could we look quite naively at the question of a seat for the mind within the body, we might perhaps suppose it diffused there, not localized in any one particular part at all. That it is localized and that its localization is in the nervous system—can we attach meaning to that fact? The nervous system is that bodily system the special office of which, from its earliest

appearance onward throughout evolutionary history, has been more and more to weld together the body's component parts into one consolidated mechanism reacting as a unity to the changeful world about it. More than any other system it has constructed out of a collection of organs an individual of unified act and experience. It represents the acme of accomplishment of the integration of the animal organism. That it is in this system that mind, as we know it, has had its beginning, and with the progressive development of the system has developed step for step, is surely significant. So it is that the portion in this system to which mind transcendently attaches is exactly that where are carried to their highest pitch the nerve actions that manage the individual as a whole, especially in his reactions to the external world. There, in the brain, the integrating nervous centers are themselves further compounded, interconnected, and recombined for unitary functions. The cortex of the forebrain is the main seat of mind. That cortex, with its twin halves corresponding to the two side halves of the body, is really a single organ knitting those halves together by a still further knitting together of the nervous system itself. The animal's great integrating system is there still further integrated, and this supreme integrator is the seat of all that is most clearly inferable as the animal's mind. As such it has spelt biological success to its possessors. From small beginnings it has become steadily a larger and larger feature of the nervous system, until in adult man the whole remaining portion of the system is relatively dwarfed by it. It is not without significance, perhaps, that in man this organ, the brain cortex, bifid as it is, shows unmistakable asymmetry. Man is a tool-using animal, and tools demand asymmetrical, though attentive and therefore unified, acts. A nervous focus unifying such motor function will, in regard to a laterally bipartite organ, tend more to one half or the other, and in man's cerebrum the preponderance of one half—namely, the left—over the other may be a sign of unifying function.

It is to the psychologist that we must turn to learn in full the contribution made to the integration of the animal individual by mind. But each of us can recognize, without being a professed psychologist, one achievement in that direction

which mental endowment has produced. Made up of myriads of microscopic cell lives, individually born, feeding and breathing individually within the body, each one of us nevertheless appears to himself a single entity, a unity experiencing and acting as one individual. In a way, the more far-reaching and many-sided the reactions of which a mind is capable, the more need, as well as the more scope, for their consolidation to one. True, each one of us is in some sense not one self, but a multiple system of selves. Yet how closely those selves are united and integrated to one personality! Even in those extremes of so-called double personality, one of their mystifying features is that the individual seems to himself at any one time wholly either this personality or that, never the two commingled. The view that regards hysteria as a mental dissociation illustrates the integrative trend of the total healthy mind. Circumstances can stress in the individual some, perhaps lower, instinctive tendency that conflicts with what may be termed his normal personality. This latter, to master the conflicting trend, can judge it in relation to his main self's general ethical ideals and duties to self and the community. Thus intellectualizing it, he can destroy it or consciously subordinate it to some aim in harmony with the rest of his personality. By so doing there is gain in power of will and in personal coherence of the individual. But if the morbid situation be too strong or the mental self too weak, instead of thus assimilating the contentious element, the mind may shun and, so to say, endeavor to ignore it. That way lies danger. The discordant factor escaped from the sway of the conscious mind produces stress and strain of the conscious self; hence, to use customary terminology, dissociation of the self sets in, bringing in its train those disabilities, mental or nervous or both, that characterize the sufferer from hysteria. The normal action of the mind is to make up from its components one unified personality. When we remember the manifold complexity of composition of the human individual, can we observe a greater example of solidarity of working of an organism than that presented by the human individual, intent and concentrated, as the phrase goes, upon some higher act of strenuous will? Physiologically the supreme development of the brain, psychologically the mental

powers attaching thereto, seem to represent from the biological standpoint the very culmination of the integration of the animal organism.

The mental attributes of the nervous system would be, then, the coping-stone of the construction of the individual. Surveyed in their broad biological aspect, we see them carrying integration even further still. They do not stop at the individual; they proceed beyond the individual; they integrate, from individuals, communities. When we review, so far as we can judge it, the distribution of mind within the range of animal forms, we meet two peaks of its development—one in insect life, the other in the vertebrate, with its acme finally in man.. True, in the insect the type of mind is not rational, but instinctive, whereas at the height of its vertebrate development reason is there as well as instinct. Yet in both one outcome seems to be the welding of individuals into societies on a scale of organization otherwise unattained. The greatest social animal is man and the powers that make him so are mental: language, tradition, instinct for the preservation of the community as well as for the preservation of the individual, reason actuated by emotion and sentiment and controlling and welding egoistic and altruistic instincts into one broadly harmonious, instinctive-rational behavior. Just as the organization of the cell colony into an animal individual receives its highest contribution from the nervous system, so the further combining of animal individuals into a multi-individual organism, a social community, merging the interests of the individual in the interests of the group, is due to the nervous system's crowning attributes, the mental. That this integration is still in process, still, developing, is obvious from the whole course of human pre-history and history. The biological study of it is essentially psychological; it is the scope and ambit of social psychology. Not the least interesting and important form of social psychology is that relatively new one dealing with the stresses and demands that organized industry makes upon the individual as a unit in the community of our day and with the readjustments it asks from that community.

To resume, then, we may, I think, conclude that in some of its aspects animal life presents to us mechanism the "how" of

which, despite many gaps in our knowledge, is fairly explicable. Of not a few of the processes of the living body—such as muscular contraction, the circulation of the blood, the respiratory intake and output by the lungs, the nervous impulse and its journeyings—we may fairly feel, from what we know of them already, that further application of physics and chemistry will furnish a competent key. We may suppose that in the same sense as we can claim to-day that the principles of a gas engine or an electromotor are comprehensible, so will the bodily working in such mechanisms be understood by us, and indeed are largely so already. It may well be possible to understand the principle of a mechanism that we have not the means or skill ourselves to construct; for example, we cannot construct the atoms of a gas engine.

Turing to other aspects of animal mechanism, such as the shaping of the animal body, the conspiring of its structural units to compass later functional ends, the predetermination of specific growth from egg to adult, the predetermined natural term of existence—these and their intimate mechanism, we are, it seems to me, despite many brilliant inquiries and inquirers, still at a loss to understand. The steps of the results are known, but the springs of action still lie hidden. Then again, the “how” of the mind’s connection with its bodily place seems still utterly enigma. Similarity or identity in time relations and in certain other ways between mental and nervous processes does not enlighten us as to the actual nature of the connection existing between the two. Advance in biological science does but serve to stress further the strictness of the nexus between them.

Great differences of difficulty, therefore, confront our understanding of various aspects of animal life. Yet the living creature is fundamentally a unity. In trying to make the “how” of an animal existence intelligible to our imperfect knowledge we have, for purposes of study, to separate its whole into part aspects and part mechanisms, but that separation is artificial. It is as a whole, a single entity, that the animal—or, for that matter, the plant—has finally and essentially to be envisaged. We cannot really understand one part without the other. Can we suppose a unified entity that is part mechanism and part not? One privilege open to the

human intellect is to attempt to comprehend, not leaving out of account any of its properties, the "how" of the living creature as a whole. The problem is ambitious, but its importance and its reward are all the greater if we seize and attempt the full width of its scope. In the biological synthesis of the individual, it is concerned with mind. It includes examination of man himself as acting under a biological trend and process that is combining individuals into a multi-individual organization, a social organism surely new in the history of the world. This biological trend and process is constructing a social organism the cohesion of which depends mainly on a property developed so specifically in man as to be, broadly speaking, his alone—namely, a mind actuated by instincts, but instrumented with reason. Man, often Nature's rebel, as Sir Ray Lankester has luminously said, can, viewing this great supra-individual process, shape his courses conformably with it even as an individual, feeling that in this case to rebel would be to sink lower rather than to continue his own evolution upward.

METHODS OF EVALUATING OUR IMMIGRANT PEOPLES

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PROBLEMS arising from the contacts and mixtures of human varieties are no new thing in this country, which has been built up through such contacts and mixtures from its very beginning. But these problems seem to be pressing on popular attention as never before. The heavy immigration, in the decades before the European War, of peoples less familiar to us than those who came in the earlier decades of our history occasioned a general uneasiness as to the results, and now that great streams of humanity, turned aside from their old beds by the upheaval of the war, are pressing into new channels, the problems become more insistent.

How shall we apply a measurement to these problems that will show us the nature of the human elements involved, the nature and direction of the forces at work in their interaction? If we can succeed in such a measurement, we shall know how to regulate the human currents; we shall know whom to let in, whom to exclude; we shall know better how to deal with the peoples already here.

The problems involved are not only economic, but social. When we bring in men as "hands", we also get their heads and hearts and temperaments. Out of working hours they are going to live as social beings, so that measurements are needed of all these aspects. We may indeed consider that even the economic problem cannot be understood without consideration of the social factor.

The social problems that attract our attention most immediately and that are most prominent in the public mind are those of the special classes, of individuals whom we classify roughly as the dependent, defective, and delinquent. These do not, however, make up all of the social problem, and, indeed, their problems are not the most fundamental. After

all, these special classes are a small part of any population; every population has to deal with them, and there is no tremendous difference in the relative weight of this burden from time to time or from place to place. And these special classes are only end results of more general phenomena. To understand them we have to go back to the general population and find out something more about it.

Even the social worker whose primary task it is to deal with these special classes is more concerned about general social conditions. It is of fundamental importance to know how various peoples will behave in general social relations. What sort of family life will they want to develop or be able to develop? What will be their relation to the social group in which they live? Will they be able to coöperate with their fellow beings in building up a workable community life? Will they assimilate to such a degree that the efforts of a community may be directed toward a common end, and not be scattered and wasted through conflict? What ends will they pursue? What state will they build up? What culture will they develop?

Such questions bring with them innumerable sub-questions, involving special aspects of social and economic life. How shall we proceed to answer them?

Following the statistical method, we may pick out certain marks and signs and proceed to count those who possess them. The difficulty with this method is that the things we most want to know about are often those that are the hardest to isolate and count, and the things that we can count are not the immediate things we want to know about. We have to infer from the counting of some things the existence of other things, and sometimes we forget that the things we count are not the things we want, and think that we have proved one thing from the counting of another.

Take, for instance, the measurement of criminality by statistics. Much use has been made of statistics to show a greater degree of criminality among certain immigrant peoples than among others. We are given comparative rates, showing some people low in the scale, some high up.

This may satisfy the mind so long as we have only one set of rates before us, but a new set of rates apparently gives a

different result, leading the profane to jeer that "you can prove anything by statistics". This, of course, is not the fault of the statistical ratios, but of the conclusions drawn from them. If we always keep in mind just what is being compared, and how nearly correct the counting has been, the discrepancies will disappear. But, unfortunately, even the learned may forget for a moment just what has been counted in the statistics.

The criminal statistics available to us, for example, are not measurements of individual characters, or even of individual acts. They are measurements of the results of governmental procedure. If we try to compare rates of criminality in different countries as some guide to differences in tendency to commit antisocial acts, we shall find that the different rates also measure differences in the laws that make certain acts crimes and differences in degree of enforcement of the laws.

Suppose we try to compare the criminality rates of various peoples in this country. Here we must have recourse to the statistics of prisoners in institutions. These are people who have been punished for the commission of some act by imprisonment. Those who have committed some antisocial act and have been discharged and those who have been punished in some other way than by imprisonment—by fine, for instance—are not counted. On the other hand, some people who have not really committed antisocial acts, but have been convicted and sentenced to imprisonment, are counted in.

If different peoples differ in their ability to escape punishment, the ratios will not give the true difference in regard to the commission of antisocial acts. Applying this to the question of the immigrant, some students of the subject say that certain peoples among the foreign born elude punishment in greater proportions because the immigrant group will protect the criminal of its own nationality and because the police have an insufficient knowledge of their language and methods. On the other hand, the foreign born are found largely on the lower economic levels, where it is less easy to find resources for a proper defense in court. And in a large class of cases this works directly and obviously to increase the rates for the poor. In cases punishable by fine or imprisonment, the poor man will take the imprisonment, the man with money will

pay the fine. The former will appear in "criminal" statistics, the latter will not.

Another difference will appear according to whether prison population at a given time is counted, or commitments during the year. Obviously, the prison population at a given time will give a higher proportion of those who have committed offenses involving a long term of imprisonment, while statistics based on commitments will show a higher proportion of minor offenders, whose terms last much less than a year. Should the foreign born be more largely represented among the minor offenders, "criminal" statistics based on commitments will place him at a greater disadvantage than statistics based on population at a given time.

A common fallacy in all statistics of special classes is found in the failure to clear away conflicting factors. For instance, if we compare the rates for the foreign born as a whole with the rates for the native born as a whole, we are comparing groups that differ both in age and sex composition, and criminality as measured by number of prisoners is seen to vary by sex and age as well as by country of birth. The native-born population contains a large proportion of women and children, and the rates of criminality for women and children are always comparatively low. The foreign born include a large proportion of young adult males for whom the crime rate is generally higher. If we compare the same age and sex group for the foreign born and the native born respectively, the differences are greatly reduced and the native and foreign born are seen to be much alike. And these are simply the most obvious of the factors involved. Other differences besides that of birth might be shown that would affect the statistical result. Of course, we can say that we do not care what factors are involved, that we are interested only in the fact that so many foreign-born persons give us so many criminals; but really we are not satisfied with that result. We really are trying to find out how far foreign birth, distinct from age and sex, is responsible for differences.

It seems plain that the statistical method cannot give us information about actual criminal tendencies on the basis of any material that we are collecting or are likely to be able to collect.

We should like, if we could, to distinguish in our measurement of peoples between their inherited, native qualities and those developed in them by environment. We know that intelligence is a valuable quality, and so tests have been devised intended to measure the variability of inherited intellectual capacity. This is not the place to discuss in detail the intelligence tests now in use. I will simply point out some difficulties in their application as selective tests for immigrants.

An item of value in these tests is that definite scales of measurement are established, and the units of investigation can be counted accurately according to measurement. But, as with other statistical methods, a further question is, what is counted? These tests are called "intelligence" tests, but each test is, strictly speaking, a test of ability to perform an operation of a given sort under given conditions. It is an inference that ability to perform this operation indicates "intelligence" in a general sense. Furthermore, in its application to the social problem, we have to make the further inference that "intelligence" in a general sense is the sort of ability needed to handle the particular problem involved.

Those who are actively engaged in dealing with social problems are skeptical as to generalizations based upon the intelligence tests—for instance, those that show high percentages of mental defect among special classes. They question the methods used in the test, and the extension by analogy of the results found for one group to other groups. They feel that insufficient measurements have been made of groups not in the special classes, and suspect that if the same methods were used for the general group from which the special groups are drawn, similar percentages might be found, and at the same time the general group would be found managing its own affairs with a fair amount of success—making a living, rearing families, and keeping out of prison or almshouse. Those who are actually working with immigrants see many a peasant worker who would probably rank low in the intelligence tests who is making a success of his life in all important respects.

They are by no means satisfied, either, that the tests so far worked out are strictly tests of inherited capacity. Surely the ability to meet any test will vary with the condition of

the person taking the test, and should such tests be used as a method of selection at a port of entry, surely that is the very place at which an immigrant would show his ability to the least advantage. Nor are the contents of the tests themselves above criticism. Elements in the Army B test may be pointed out that presuppose certain experiences which not all those subjected to it may have had. And in such a test, arranged to do away with language distinctions, there is the further difficulty of understanding instructions given in dumb show. Even the signs made to show the person tested what to do may be more or less intelligible according to his previous experience and habits of expression. A story that illustrates this difficulty is told of a teacher who was trying to teach English to foreigners by the "natural method". She was endeavoring to put across the meaning of the word "tired" by laying her head wearily on her arms. After long study, one of the men cried out triumphantly: "Ah! Drunk!"

And something besides intelligence, even in special applications, is involved in social problems. High intelligence may be ill directed. There is a general idea that a high correlation exists between low intelligence and crime. Various estimates have been made of the proportion of low mentality among criminals. It has been said that 50 per cent of those confined in penitentiaries and reformatories are mentally defective. It has also been said that 75 per cent of all criminals are under the mental age of twelve. Such general estimates are based on tests of small samples in the first place, and will vary according to the tests used. As a straw in the opposite direction, it may be noted that Dr. Glueck found, in a study of 213 foreign-born prisoners at Sing Sing,¹ that 35 per cent of them, as measured by a standard test, had a mental age under twelve, exactly the same proportion found in the army draft, as given in the summary table that has enjoyed such wide currency.

Whatever the proportions, however, we must again remember that the "criminals" measured are prisoners, not all who have committed crime, and that presumably their intelligence

¹ See *Crime and Immigration*, by Kate Holladay Claghorn. *Journal of the American Institute of Crime and Criminology*, Vol. 8, pp. 675-93, January, 1918.

level is lower than that of those who have managed to elude the law.

We evidently need something more than an intelligence test for measuring differences between people that are important from the social point of view. The intelligence test gives only one value, intelligence, in one particular application. There are different types of mental ability; we ought to know something about them, and we ought to know something of temperament—a word we may use to cover various combinations in the general complex of instinctive and motive forces.

When we try to establish units for these and then try to count them, however, we find ourselves in difficulties. Take the individual analysis card of the Eugenics Record Office as an example. The person questioned is asked to grade by underscoring his general mental ability, general memory, special memory, apropos association, constructive imagination, poetic imagination, logicalness, concentration, special ability or lack of it in art, craftsmanship, letters, science, and the like; to tell his prevailing mood, periodicity in nervous behavior; to characterize by underscoring regularity in habits, purpose or coördination in work, ability to profit from experience, whether living at high, medium, or low nervous tension, whether hard or easy to get along with, and the like; to evaluate by underscoring common sense, industry, persistence, moral courage, physical courage, sensitivity to pain, moral discrimination, conscientiousness, self-control, self-respect, and so on.

In such a list we are getting varieties that mean something socially. But here we ask, how do we know that the person is really persistent, courageous, and so forth, and how do we know that the list given sums up his character? Apparently such lists could vary with the imagination of the framer and in fact they are found to do so.

And naturally the answers to the same question for the same person could vary widely, according to who is doing the testing, since no objective test is made. The answers will be opinions or estimates only. If the subject fills out this questionnaire himself, he will hardly know how to describe himself, if he is honest, and in any case will naturally tend

toward describing himself in what he considers to be a favorable light.

Such lists, besides, do not give a basis for determining desirability. The same quality may be desirable or undesirable according to the relation in which it is manifested and the point of view of the person making the judgment. Is persistence a desirable quality? Yes, we would say, and yet certain immigrant peoples are criticized for their "persistence" in certain relations. A recent magazine article characterizes our colonial ancestors as the "finest race", the "bravest, most hardy, most independent peoples of Western Europe", the "sturdy, liberty-loving New England stock". The same adjectives, however, could be applied just as truly to their predecessors in the land, the Red Indians, the original Americans, and yet they did not appeal to our ancestors as "desirable".

A difference in generally accepted preference may show itself in the use of a favorable or an unfavorable term for the same character. The man who is praised as law-abiding by one may be reproached as slavish by another; a person may be characterized by one observer as "lawless", by another as "independent", and so on. It would not take much ingenuity to construct a long list of qualities, and their opposites, to each of which a favorable and an unfavorable name might be given.

For practical purposes it would be better and simpler to show temperament in action, to show actual response in a given situation. This is exactly what we want to answer our questions on social problems. We do not just want to know whether a man has the quality of persistence, but what he is persistent about. If we study people in action we may find that in certain circumstances the same qualities may lead to different results, and that in certain other circumstances different qualities might lead to the same result. And it is the result, after all, that we want to characterize as desirable or undesirable.

For instance, an Italian official the other day was discussing the behavior of the men in the Italian army. We hear of the Italian as a poor soldier, and we find the individualistic spirit a striking characteristic in him. Naturally he is a poor

soldier, we think, because he is unwilling to obey orders. But this official showed that when officers took pains to explain to their men the reasons for the operations that were to be undertaken, the regiments fought courageously, while those to whom operations were not explained could not be depended on so completely. Another temperamental type would have worked to the same end through command without explanation.

If we try to study temperaments and characteristics in actual situations, we not only secure a kind of information that is of more use to the student of social problems, but we insure greater accuracy. If I describe some actual occurrence in which "persistence", for example, is shown, I am more likely to describe it as any one else would agree it should be described, and I am better able to understand whether "persistence" in the person studied is a "desirable" quality.

The type of research, then, that is needed to throw light on social problems is the type that shows relation, not an abstracted, individual trait—the type that shows process and not merely a situation. What is needed is a study of responses, which means a study of interaction, and this means a study of stimulus as well as of response.

How shall this method be worked out as a means of evaluating our immigrant peoples? A practical means is the intensive study of personal histories. Such a study should cover the environmental factors, physical and social, and should pay especial attention to the attitudes of mind, the reactions and responses, of the individuals studied in relation to the environment. We should begin with the individual immigrant in his old home, learn about his surroundings, his ideals, his successes and his failures and how they came about; we should follow the same man to this country, again study his surroundings, his attitudes, his successes and failures. This means that we must study the American environment, the surroundings into which the immigrant comes, as carefully as we study the immigrant himself. This necessity is often overlooked. We think it enough to study the immigrant by himself, not in relation to the forces at work upon him. We have a tendency to assume as surroundings for the immigrant an abstract "American" community, embodying a

standardized set of ideals and purposes with which the immigrant is more or less out of harmony, to which we wish to "assimilate" him, and an abstract immigrant "colony" which, we think, is generally bad and from which we want to remove him.

The situation is not so simple as that. There are innumerable "Americas". There are many ideal "Americas", not one, as we discover if we pay attention to the actual expressions of one group and another; and the real "Americas"—the community surroundings in which the immigrant finds himself—differ widely. And we cannot understand the immigrant or what he is going to mean in our life without understanding just what "America" he is living in.

Such personal histories will include so many elements that we cannot hope for much success in applying statistical measurements. In a collection of many of them, however, certain uniformities of connection between circumstance and response will begin to show themselves, not reducible to mathematical ratios, perhaps, but, like the cumulation of lights and shadows in a composite photograph, giving us a more or less definite portrait of a type.

These uniformities will for one thing give an indication of profitable lines of treatment of a problem, and the treatment itself will become part of the process of research—the process of experimentation that is so badly needed for the development of a social science. Or, if we find that treatment is impracticable, and that conditions will, in all probability, remain the same, then if undesirable results are found following certain combinations of individual and environment, we can put a stop to the admission of such individuals as are likely to fall into such combinations.

It is frequently urged, against restriction of immigration, that the undesirable results shown are not the fault of the immigrant, but of the American environment, and that the immigrant should not be shut out for what is not his fault. This argument would hold were we likely to change the American environment, but if present conditions are likely to continue, the results are just as undesirable as if they were the fault of the immigrant. Studies of the kind mentioned, however, showing clearly the real pressure upon the immigrant

of the American environment, would afford a stimulus to improving conditions that the average citizen, immersed in his dream of an ideal "America", has not had before.

How shall such investigation be carried on? The social workers of the country have developed a technique especially adapted to the collection of material of this nature, and have made contacts through which it can be secured. And they have already collected a body of information of which use may be made. The material now on hand, however, is far from adequate. To carry out the task of research more completely, the social worker needs further training in the summarizing of material and greater financial support in carrying on research work.

Some of the large organizations are already starting work of this kind on their own account. A glance over the field indicates how fruitful are the possibilities. The numerous organizations interested in family and child welfare have great opportunities for studying the capacity for self-help, for wholesome family life, the standard of living, the culture and ideals and attitudes, of the immigrant, and the results of immigration in the second generation, in different immigrant peoples in direct relation to the circumstances in which they are manifested. The probation officers and social workers in courts of domestic relations can throw much light on family problems, with their social background. Social workers connected with the criminal courts can gather the social facts that are needed to give the inner meaning of the external measurements afforded by statistical ratios. Medical social workers are in an admirable situation to get facts about physical stamina and recuperative power. Psychological clinics connected with social agencies can correlate mental tests with specific lines of activity and specific environments.

We need, beyond the study of special classes reached directly by the social agencies, a study of the non-special class, of the average man as he is found plugging along at his daily work in the community. Contacts with this class can often be made indirectly by these agencies through the persons with special disabilities with whom they deal directly. The aid of the visiting teacher and the settlement worker, also, may be enlisted for the study of this non-special class.

A general advantage enjoyed by all types of social workers is the opportunity for continued contact with the subject of study. It is impossible to get such trustworthy information about details of a life history, about attitudes of mind, in the brief and hurried visit of an investigator who is a stranger to the person studied, as from repeated contacts made by one who has become known as a friend and a discreet person. Many a well planned study has been spoiled by this lack of continuous acquaintance.

It will be noted that nothing has been said in connection with this plan of research about distinguishing between strictly hereditary and environmental factors. For use in helping to solve the practical problem of selection this does not seem possible. The difficulties in the way of making a clear distinction between the two are great. And if we had it, we could not use such information to select immigrants on the basis of "race", because the races, so far as we are able to distinguish them as local or language groups, are made up of diverse hereditary strains. And to untangle the purely hereditary characters of the separate strains so that undesirable strains could be excluded would take so long that the subjects would be dead before the tests could be applied.

The immigrant as he comes to us, however, has developed, as a result of heredity and environment together, a fairly measurable and relatively enduring system of responses, which studies of this kind will show us, and which will be of practical help in determining what types shall be admitted to this country and—of equal if not of greater importance—what treatment shall be given to the types now here.

For whatever we do about selection for the future, we have the problem of the immigrant already with us. The "foreign white" of yesterday in all his varieties has become the "native white of foreign parentage" of to-day, and will determine the "native white" of to-morrow just as surely as if not one additional foreign-born person should be received here.

PSYCHOANALYSIS AND THE SCHOOL*

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THE fact that I have been asked by the council to open this discussion suggests to my mind two things: First, that what I have said and written on the subject of education has had a share in contributing to this honor; I hope I need not say how much gratified I am thereby. But, further, the invitation suggests that *your* profession is still willing to learn something in this connection from *my* profession. That is important—and I think it is desirable. In any case, it stands for the two aspects of analytical psychology that I propose to discuss to-day.

And here let me make a technical reservation. This discussion is entitled *Psychoanalysis and the School*. But we have it on the best possible authority that the theory and technique laid down by Professor Freud alone constitute "psychoanalysis". Now however much we may appreciate the epoch-making work of the founder, we are not obliged to accept *in toto* the philosophical theories that he has enunciated and continues to elaborate. Therefore, it behooves us to make use of a different term if we wish—as I do—to express something wider than Freud's personal views. I propose to substitute the phrase "analytical psychology", and to discuss briefly its place in education.

As I have already suggested, this raises the question of the relation of teacher and doctor in analytical psychology. To one who has already had the temerity to publish his views upon that subject,¹ this relationship is a matter of obvious importance. Only last term I happened to be present at a school speech day. A well-known head master made a speech. He complained that the teaching profession had for long

* Read at the joint meeting of the Psychological and Educational Sections of the British Association for the Advancement of Science, at Hull, September 8, 1922.

¹ *The New Psychology and the Teacher*. New York: Thomas Seltzer, 1922.

endured the interference of Fleet Street, but that now that Harley Street had begun to add its criticisms, it was time to protest. He begged his hearers to believe that schoolmasters were experts, and to be trusted as such. I felt remorseful, and almost decided to leave education alone in the future. But his next sentence changed my feelings: "If there is one thing", he continued, "which we school masters have learned, it is that the boy educates himself." |

Now if I have a cardinal belief about education, it is that the child can educate himself only in a favorable environment. Our educational world is slowly realizing that fact, and laboriously trying to correct environments that we now recognize to be soul-destroying to both child and adolescent. In this reform, the ancient and famous school over which the speaker presided does not take a prominent position. Therefore I consider that the statement "the boy educates himself" was one of those half-truths that are worse than a lie; and while the people who claim to be educational experts are uttering these half-truths, there is at least one man in Harley Street who remains disinclined to hold his peace, however much the experts may resent his or his colleagues' interference.

And by what authority do we physicians claim this right to raise our voices on questions that do not fall within our own professional sphere? Analytical psychology is regarded by some as a method of treating functional nervous disorders. So it is; but this is, or should be, a small part of its purpose. Open air is an accepted method of treating tuberculosis, but the gospel of open air should have an infinitely wider function than that. Its real value is preventive; its application should be universal; its propaganda should be in the hands, not of doctors only, but of all who have charge of the young; and its ultimate justification should lie in the empty sanatoria of the country. So it is, or should be, with analytical psychology. Its value has become apparent in the treatment of disease, and it has been the privilege of physicians to announce to the world how much suffering and inefficiency can be rectified by enabling the victim to understand his own emotional life. But its real value should be preventive, its application as universal as that of open-air doctrines, and

its propaganda carried on, not by doctors, or even by cured and grateful patients, but by all who have any stake in the next generation. Finally, the ultimate justification of analytical psychology would lie in a complete lack of employment for those who, like myself, spend their time in trying to straighten out warped lives. If I may carry the analogy a little further, you teachers will recognize that "the interference of Harley Street", of which complaint was made by the head master whom I quoted, is an interference that will be justified until parents and teachers can show that they are playing their part in the preventive side of the work.

I have heard it said that we doctors had better convert our own colleagues before we set out to preach to experts in a different department. I beg to differ. Much as I may deplore the blindness, or alleged blindness, of many members of my own profession on this question, I feel it to be a matter of secondary importance. Apart from the parental function, the doctor can do little more than the average man to obviate neurotic calamities, and if he cannot cope with the calamities when they occur, the victims can seek help elsewhere. The teacher, on the other hand—be he parent or not—has the greatest of opportunities for saving young people from the rocks of neurosis and the shoals of inefficiency. But—and here comes the real burden of my discourse—if the teacher is to pull his weight in this matter of prevention, he must know how to value it for himself. We do not want teachers who are content to subscribe to the upkeep of the sanatorium; we cannot be satisfied with teachers who keep class-room windows open, and sleep with their own windows shut; we must have men and women to whom this gospel has a personal application and a subjective value.

And what is this gospel that you teachers have to practice first and preach afterwards? In two words, I should say that analytical psychology means self-knowledge and straight thinking, and that it signifies these two things in a degree never attainable before Freud and those who have followed him made it possible to investigate the unconscious. And, in practice, what does this mean for the educationalist? Nothing less, I venture to submit, than a perfectly new era in education. The first stage in education may be described as that

in which the teacher was expected only to know Latin, if he was to be regarded as competent to teach John Latin. About half a century ago, the idea began to dawn—very gradually, of course—that it would be a good thing to know, not only Latin, but also John. And now we come to the third era—the most challenging of the three—when you are expected to know not only Latin and John, but also yourselves. In short, the thing that I am demanding of you is self-knowledge and straight thinking as applied to the teacher himself, and as reflected in his teaching capacity.

Some of you have doubtless traveled this road a long way, and are quite possibly better equipped to voice this challenge than I am. For such I would only add to my salutation the warning that it is necessary at all times to make the manner of your conversation worthy of the gospel you are trying to commend. You will not commend that gospel by a feverish attempt to analyze each of your pupils. *Observe* analytically, by all means; you can never do too much of that. But that is quite another thing from active analysis, which may be frequently necessary, but is never unaccompanied by risk. The more experience I have of analytical work, the more chary do I become of the partial analysis without reasonable assurance of its being carried to completion. The teacher who begins to make a child think analytically is taking upon himself a serious responsibility, and may well find himself in a very awkward position with regard to the pupil's parents, who generally constitute the *fons et origo mali*, but have rarely commissioned the teacher to embark on this enterprise. People who devote their time to analyzing children and adolescents, like my friend Dr. Hamilton-Pearson, have a far better chance of making a success of analytical treatment, quite apart from their presumably greater skill and experience. It seems to me that the teacher's analytical function is to observe and understand his pupil and, when necessary, to recommend formal analytical treatment.

There are, however, two lesser warnings that I should like to express. In the company of analysts, actual and would-be, and of analyzed, psycho- and otherwise, I frequently perceive two tendencies that have a peculiarly irritating effect upon outsiders. The first is the tendency to jump to conclusions,

to postulate motives and mechanisms that are analytically possible, or even probable, but that savor to the uninitiated of arbitrary guesswork. So it is a valuable form of self-discipline for the initiated to refrain from expressing to the uninitiated such of his thoughts and theories as cannot be justified by some show of reason. The second tendency that outsiders resent is the pigeonholing method and the labeling system. If we are perpetually attributing to our friends, colleagues, or pupils, Oedipus or Electra complexes, we may be employing a convenient jargon suitable for our own use, but it is one that is quite naturally irritating to others. I have no doubt that as some of my analytical friends perceive the announcement of this address, they will murmur to themselves: "There he goes again, trying to work off his Gamaliel complex."

But apart from those of you who are initiated, there are likely to be some who feel profoundly discouraged by the nature of my challenge. You feel that you have always tried to know yourself, as well as your subject and your pupils. You feel that you have done everything in your power to increase that knowledge. You feel that analysis is a long, exhausting, and for the most part expensive business, and that it is not for you in your crowded and absorbing life. Let me sympathize with you, and at the same time give you a word of encouragement. As far as the expense of analysis goes, there is the Tavistock Clinic in London, of which I have the honor to be director, where we try to solve these problems. We are always glad to undertake the treatment of elementary-school teachers and of all such other teachers as are not in a financial position to face the ordinary fees for analysis. At the clinic this treatment is given by specialists at nominal fees. Then, we also arrange courses of lectures, and are prepared to arrange similar courses in the provinces under the auspices of educational associations and the like. Furthermore, we have experienced leaders of study circles, whom we are prepared to send to local groups by arrangement. Finally, our lecture secretary is always pleased to answer inquiries about books; and in these days, when such a literary spate is in progress in the analytical world, guidance of this kind is often of real use. So I bid you not to despond,

but to get hold of what you can and wait patiently for further opportunities.

In addition to the two classes of the initiated and the discouraged, there is conceivably a group among you who may be represented by the head master I quoted at the beginning of my address. Perhaps they will object to being described as "the complacent"; they might also object to the epithet "reactionary". Shall we call them the "resistant"? It may be that this group is not represented in this audience, and as I labor under the disability of speaking before, and not after, the discussion, its presence must be a matter of surmise. Shall we assume, then, for the sake of amity, that the resistant educationalists are unrepresented at the British Association, and on this assumption agree to talk *about* them, rather than *at* them?

Let us clearly understand, in the first place, that a bad teacher may be what he is either from temperamental causes or from character causes. Temperamental failures are irretrievable failures, and no amount of psychology, old or new, will make a good teacher out of the man or woman temperamentally unequipped for the vocation. That is, of course, a truism; nevertheless I have mentioned it because I see around me many analysts attempting to make the silk purse out of the sow's ear. Not even psychoanalysis can achieve this miracle. No treatment can cure the color blind; no training can save those who are tone deaf; no amount of analysis will give, let us say, a sense of humor, to those who have entered the world without it. I hope you will not think me frivolous, for I am in real earnest when I say that there is only one tragedy greater than the teacher without a sense of humor, and that is the psychoanalyst who is similarly handicapped. The teacher who always takes his pupil *au grand sérieux* and the analyst who does likewise with his patient are both apt to end in the tragedy of taking themselves seriously. From this and other temperamental failings analytical psychology offers no complete escape.

To-day, however, we are concerned rather with the great category of failures attributable to character that is undeveloped or ill developed; and here analytical psychology has much to say and serious hope to hold out. I have referred

already to the necessity for the teacher to know his pupil. We recognize to-day that it is due to our manifold repressions that we cannot get to know our pupils. It is the complexes that produce our own mental astigmatisms that prevent us from seeing in true perspective our pupils' natures. Just as the astigmatic is unaware of his failing, so we are unconscious of our psychic defect until analytical tests are applied. When we have made contact with our own unconscious, we begin to recognize the difference between our *anima* and our *persona*, between our true self and the self we imagine we are, between the subjective and the objective sides of our character. With this new revelation, we can begin to apprehend what we could not apprehend before: that the stupidity of one pupil, the laziness of another, and the apparent viciousness of a third are but the objective manifestations of subjective maladjustments that cannot be cured by an objective attack, but demand a much more careful subjective approach. Furthermore, it is only in the light of analytical knowledge that we can assess the factor of unredeemed childishness in ourselves; and until that knowledge has been achieved, how can we help our pupils to grow up? It is impossible for the Peter Pan type of schoolmaster to lead his pupils anywhere except to the "Never-never Land". It is impossible for the Narcissan, permanently in love with his own "ideal ego", to bring a boy to face his "real ego". And what can be expected from an adult sensation-monger in the way of training children to forego the limelight? It has been said: "That fisherman deserves failure who allows his eager shadow to come between the sun and the stream." It is true; and there are not a few teachers who, blind to their own puerile characteristics, commit some or all of these failures of psychological immaturity. They are, no doubt, eager teachers, but for all their eagerness, they have never realized themselves; how, then, should they be able to lead their pupils to self-realization?

Perhaps it is in the problem of discipline that analytical psychology has the greatest contribution to make. There are many ways of meeting this problem. At one end of the scale is the method employed on certain training ships. It is a direct method, and it has a certain quality of effective-

ness. Those of you who know what I mean will probably send your sons elsewhere. At the other end of the scale there is the *dernier cri* in the scholastic world—the really up-to-date school, which will celebrate its jubilee about forty-five years hence. It circulates a charmingly illustrated prospectus, showing the numerous amenities of St. Ursula's-by-the-Sea (or whatever its name may be). If you read the prospectus carefully enough, you are certain to find this phrase on some page or other: "The problem of discipline simply does not arise at St. Ursula's." In that case, all I can say is that it ought to arise, and if it does not, there is something wrong with the school. Think for a moment. You teachers are dealing with children and adolescents in the aggregate; your business is to harmonize the child's possibilities and the herd's requirements. You have these pupils under your care during the years when they are necessarily making that very difficult adjustment to herd obligation and authority. The problem is there all the time, and if there is a pupil to whom this adjustment constitutes no problem, there is probably something abnormal about his make-up.

I have indicated two extremes in dealing with the problem. Both to my mind are wrong; both suggest a lack of self-knowledge on the part of the teachers. What I have described as the training-ship method commends itself to men with an unresolved power urge, men who have little or no interest in the child's mental mechanisms, but only in his behavior. On the other hand, the visionaries who run St. Ursula's must necessarily achieve the solution of the discipline problem by the simple expedient of eliminating social demand. It is obvious that if punctuality and even attendance at meals are optional, no disciplinary problem can arise in this connection. I submit that the teachers who conceive and conduct establishments on these lines are deficient in self-knowledge. They may have been psychoanalyzed, but, if so, they are extremely bad advertisements for the treatment. They are clearly rebels to social authority themselves, and they think to develop the child's potentialities by removing from the school environment all that savors of authority. They may help some children; they certainly serve society very ill. Nothing, as you teachers well know, is more tragic than the youth who

ends his so-called education without having made his adjustment to the herd. Obviously, then, the problem of discipline can be solved only by teachers who, in the deepest sense, know where they stand themselves; teachers who have escaped the Scylla of ultra-suggestibility and the Charybdis of a rebel reaction; teachers who recognize their function of interpreting to the growing mind—so often antagonistic, so constantly bewildered—in the wisest and most patient way the unescapable demand of the herd upon the individual's service and good will. These teachers, and these only, can successfully meet the problem of discipline. That problem can never be solved by those who think of themselves as "good disciplinarians". The hackneyed phrase conveys to my mind the sense of status that is sometimes found among those who fail to understand the real problem that confronts every adolescent.

I have used the phrase "sense of status"; I owe it to an article by Mr. Clutton Brock. It is an illuminating expression, and one that corresponds to the analytical conception of the "ideal ego" and, more or less, to Jung's "*persona*". In all our dealings with the young, the most pernicious sense of status from which we can suffer is that of the adult. There are some teachers who cannot make any vital contact with their pupils because they cannot forget that whereas they (the teachers) are grown up, their pupils do not enjoy this inestimable privilege. It may be surmised with great probability that the dreams of such teachers are very illuminating in this connection. They might, for instance, dream of themselves as having adult bodies and dolls' heads; in a thousand other ways their unconscious is likely to pour ridicule upon their sense of being grown up. People who have grown up in the only true sense can make contact with children and adolescents just because they have none of that adult self-consciousness that I am describing. The teacher who is still hampered by it must necessarily maintain an attitude of patronage towards the young—and if there is one barrier more insurmountable than another, it is this of patronage. The child knows it intuitively and instantaneously; the adult is dismally unaware of it. It leads us to assume without ever a question that the adult way of doing a thing is infallibly the

best; that if the child deviates from that way, he must necessarily be wrong; and by a simple step in logic, it leads to traditionalism of the worst type, and to that permanent distrust of the new which is the characteristic of every reactionary. There was a time when education consisted in forcing the child to follow in the footsteps of the adult, dragging him along. Then came the period when we recognized that he had to do the climbing himself, if we were content to show the way. Now we are learning that he has often to find for himself a new way, conceivably better than our own, perhaps leading to a different summit; and that his summit, perchance, may be a higher one than ours. We have to recognize, and that ungrudgingly, that the child is our inferior only on the conscious plane—that is, so far as logical processes and factors of experience are concerned—while on the unconscious plane—in matters of intuition, creation, art—he may very well be in a position to lead us, instead of our leading him. Let us, then, get away from our sense of adult superiority, and remember that potentially and intuitively there is no evidence of superiority to be derived from relative age. And the trouble with this adult self-consciousness of ours is that in the nature of things it does not proclaim itself in our adult world, and therefore it tends to escape correction at the hands of our candid friends or relatives. Here, then, is one particular psychological failure to which analytical investigation can very fruitfully be directed.

Perhaps, however, I am talking wide of the mark, and making a mistake in taking for granted that we are agreed as to what education means. Perhaps some of you have been impatient of my constant references to character and character growth. You may feel that all this fine stuff about self-realization makes little appeal to government inspectors; that if psychoanalysis can help Jones minor to get more than 20 per cent in algebra, you would be glad to go further into the matter. Ladies and gentlemen, if I have assumed too much, I can only express my regret. But, believe me, there is a very close connection between character and intellect. Aristotle wrote: "Neither is it clear whether education is more concerned with intellect or with character." From my own point of view, the matter is perfectly clear; but there is

this much to be said from the teachings of the new psychology: If we seek the development of the child's character first, the growth of his intelligence rarely disappoints us. On the other hand, if we make the intellectual end the primary aim of education, character growth follows only haply and fortuitously, in certain temperaments, but not in the majority. And, after all, what society calls out for to-day, and what it has called out for in all generations, is adults with well-grown characters. It may not say this through the medium of Whitehall; it may not express it in any articulate form at all; yet that is at bottom the primary desire of society for the next generation.

Finally, let me say one word more as to the relation of our respective professions in this matter. Analytical psychology may make no appeal to you. You may be dissatisfied with your results, but convinced that improvement cannot come along these lines. I beg you to think again, and to remember that your work must pass the critical examination of analysts in the days that are yet to come. This year you may succeed in getting Smith minor through some examination, and you may feel satisfied. Ten, twenty, thirty years hence, your Mr. Smith, suffering from headaches and insomnia, may tell the analyst who is treating him that the sinister individual in that nightmare recalled to his mind a certain master who, when he was fifteen, pushed him through an examination; and he may add: "He was a regular slave-driver. I used to wake at night thinking of my work. I think it was then that fear began to take hold of me." I am not speaking fancifully. Every analyst comes across such cases frequently; and when I meet them in my consulting room, I feel how much poorer an opportunity is mine of curing this troubled soul than was yours, when you might have made him into a man, and when, instead, you made him into a neurotic.

THE SIGNIFICANCE AND MANAGEMENT OF HYPOCHONDRIACAL TRENDS IN CHILDREN*

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IN 1919 an attempt was made to discuss 60 cases of chronic hypochondriasis which were treated on the wards of this clinic from 1913 to 1918.¹ The ages of these patients ranged from twenty to seventy-two, and their years of complaining from one to twenty-five. The somatic accusations, false so far as having any actual physical basis was concerned, included headache, dizziness, general weakness, nausea, vomiting, abdominal pain, eructation, "acid" stomach, flatulence, epigastric distress, anorexia, exhaustion, general pains and burning sensations over the body, insomnia, quivering and shaking feelings, backache, "falling spells", numbness, and the like. "These symptoms occurred singly or in various combinations and permutations of distress, and resulted in all degrees of incapacitation from the cheerful ambulatory invalid, quite resigned to never knowing a well day again, to the individual who had not been out of bed for nine years." In studying the genesis of these invalid states, it was found that in every instance the distressing symptoms were substitutes for psychobiological material in the form of thwarted ambitions, petty jealousies, romantic disappointments, an empty and dissatisfied life, a desire to escape marital or domestic responsibilities, and many another unhappy ingredient of life's experience. But having enucleated this psychogenic material, the question arose as to why the break of adaptive compensation in these men and women should

* Credit for the reconstructive social therapy of these cases is due to Miss Elizabeth Breckenridge Cross, of the Psychiatric Social Service Department of the dispensary.

¹ See *A Study of the Invalid Reaction*, by Esther Loring Richards. *Archives of Neurology and Psychiatry*, Vol. 2, pp. 393-413, October, 1919.

express itself in a hypochondriacal substitution rather than in an affective or schizophrenic mechanism.

Is it by accident that one takes out his bitterness and fears in harboring unjust suspicions against his viscera? And if there is a certain amount of specificity in the adaptive mechanisms of adults, how do its selective characteristics get a start? In a study of the 60 cases already referred to, as well as of many subsequent invalid types, facts of personal background have stood out frequently enough to be matters of common observation. One is a difficulty in accurately dating the present illness; another is the patient's tendency to put his symptoms on a constitutional basis of inherited weakness and natural predisposition to specific disabilities. At first blush, it seems possible to fix the onset of the hypochondriacal complaints upon a childbirth or an operation, or some other period of unusual strain, but on careful resection of individual symptoms, it becomes evident that the headache, the weakness, the belching are merely accentuations of lifelong types of distress. "Don't ask me when I began to have stomach trouble", said a weary sufferer from Tennessee. "I can't remember when I didn't have to be careful of what I ate." Then followed the inevitable completion of the couplet: "My mother complained of her stomach all her life, though the doctors never could find anything wrong with it."

In view of the constant presence of such data, it seemed but natural to follow the scent of these observations into the pathways of childhood to see whether that period has anything to contribute toward a better understanding of chronic hypochondriasis. Without heroic efforts to recruit interesting material, it has nevertheless been possible to gather a certain amount of information on this topic from a leisurely study of children who have been admitted to our psychiatric dispensary during a period of two years. From September, 1920, to September, 1922, 623 children were examined in the Phipps Psychiatric Dispensary of the Johns Hopkins Hospital. Of this number 167, or 26 per cent, seemed to be pure cultures of neurotic traits uncontaminated by mental retardation, delinquency, or somatic deficit of any kind.

The field of neurotic manifestations in children has been

most adequately furrowed by Dr. C. Macfie Campbell in his paper of 1916.¹ Under this heading he puts enuresis, sleep disturbances, episodic emotional outbursts ranging from temper tantrums to spasmophilia, and tendencies to somatic complaints, among which headache and cyclic vomiting predominate. These symptoms represent adaptive mechanisms born of a variety of conflicting trends in individual make-up and environment, and are established for the purpose of dominating the surroundings, with varying degrees of awareness on the part of the child. But apart from the purpose that they wittingly or unwittingly serve, there remains the question of the origin of these symptom pictures. In the scale of etiological possibilities, constitutional instability, or neuropathic constitution, has long occupied the most prominent place in the minds of physicians and laity. The properties of nerve tissue still have a fascinating mystery in the realm of physiology. The science of reflexes and the organization of structure has quite naturally become overgrown with theories of function that cover the whole field of conscious activity. A well known authority on the science of behavior has written a book in which he has attempted to reduce all mentally integrated activities to functions of the neuron pattern. Concerning memory, he writes²: "Of the properties inherent in nervous tissue, we shall consider irritability, because this is the basis of memory. . . . When a stimulus is applied and neurokyme flows over a given line of neurons, those neurons are somehow changed, and changed more or less permanently. . . . The change in the neuron shows in consciousness, when the stimulus is again applied. The new element in consciousness results in a recognition of the fact that we have had this experience before. Memory as thus described is a property of nervous tissue. . . . Wherever there are neuron patterns, be they simple or elaborate, there will be this memory (natural retentiveness). It is not subject to training or education." In the light of such researches as these, the immutability of native endowment

¹ *The Neurotic Child*. *American Journal of Diseases of Children*, Vol. 12, pp. 425-44, November, 1916.

² See *Psychology of the Normal and Subnormal*, by Henry H. Goddard. New York: Dodd, Mead, and Company, 1919. pp. 69-72.

assumes terrifying proportions, and inheritance does something more than qualify the possibilities of growth and development.

A second etiological viewpoint recognizes the neurotic manifestations of childhood as a biological adaptation quite divorced from conscious design or purpose. They are surface bubbles from deeply hidden springs of internal conflicts associated with the two great forces which govern all conduct—i.e., the ego instinct (self-preservation) and the sex instinct (race preservation). The behavior of the child must be interpreted through an understanding of the development of these two instincts. Since all his creative tendencies must in the ultimate analysis be traced to the sex instinct, one is forced to reconstruct the evolution of that instinct in the individual child. Perchance in the autoerotic, the homosexual, or the heterosexual stage, the dropped stitches of the neurotic conduct will be discovered in a parent-child conflict, or in a poor handling of other love interests.

However many cases there may be that seem well groomed in either of these etiological models, there are yet a goodly number of conduct disorders in children that appear adequately clothed by simpler hypotheses of origin. Among this number the children with hypochondriacal complaints seem definitely to belong. The group is not large. Of the 167 children referred to above as showing pure cultures of neurotic traits uncontaminated by mental retardation, delinquency, or grave somatic deficit, 13 per cent exhibited a definite tendency towards hypochondriacal complaints. The stories of these 22 cases are outlined in the tables that follow this article (pages 60-69) under the headings: *Age-Sex, Complaint, Duration, Somatic facts, Reaction pattern, Situational data, Adjustment program, Follow-up notes*. The ages of these children ranged from three to fifteen years, and the duration of their complaints at the time they came to the psychiatric dispensary varied from three weeks to nine years. Their symptom-pictures of distress are strangely similar to those of the adult-invalid types—palpitation; shaking in stomach; headaches; pain in chest, abdomen, and legs; weakness; giddy spells; fullness in the epigastrium; "I feel all played out"; "Sometimes I vomit a lot, too". Behind these cries there

was comparatively little background of somatic facts as discovered by pediatrician, laryngologist, ophthalmologist, or laboratory diagnostician. Fifteen cases were physically negative; four showed some eye strain; and two had a tonsil-and-adenoid condition for which operation was advised. From an etiological standpoint the most significant part of the chart record is found in the columns entitled *Reaction pattern* and *Situational data*. Here, in all but one of these 22 cases, we see children who expressed complaints that they had absorbed from an atmosphere charged with hypochondriacal utterance and fear of disease, objectively reinforced by numerous prescriptions, patent medicines, and the medical folklore of neighborhood gossip. With the pattern of these reactions well established through the daily contacts of actual behavior, it needed but the catalyzing agent of some unusual circumstance or emotional strain to produce a symptom-picture quite baffling to the ordinary approaches of clinical procedure. The disease problem here embraces not only the complaining child, but the whole family of which he is so often an insignificant part. To feed an anxious mother reassurance in a few hurried moments snatched from a busy dispensary is usually a waste of even that small amount of time. She feels that her child is being medically misunderstood as she herself has been for many years, and begins with him a weary round of other dispensaries and doctors, till, perchance, she finds a physician who takes the patient out of school and initiates him into lifelong habits of placebo therapy.

✓ In approaching the 22 cases presented in this paper, the adjustment program of each individual child has been constructed in the light of an intensive study of the family problem. With the exception of four out-of-town patients, this reconstructive therapy has been carried out by means of psychiatric social service. In taking hold of a case from this angle, the first contact made at the clinic between family and worker is of vital importance. The patient seen and talked to there accepts the worker on her visit to the home as an accredited ambassador of the physician whose advice was sought at the hospital. The best results are obtained when the visit to the home is made within twenty-four hours after

the patient's first visit to the clinic. It is easier then to emphasize the advice of the physician and clear up any points that may not have been clearly understood in the diagnosis. On visiting the home, the reception accorded varies from understanding to antagonism, depending on the intelligence and sincerity of the patient's parents. If they brought the child to the clinic as one more link in an endless chain of doctors and medicines, their attitude is usually one of tolerant indifference and more or less suspicion of the power of the physician without the aid of drugs. On the other hand, if the parents are determined, at any cost to their pride or their preconceived notions of child rearing, to get at the bottom of and remedy the evil, whatever its source, the matter of readjustment is comparatively simple. The success of one's reconstructive mission in a home where the child is a problem is often determined by discovering who is the guiding spirit there, and whether this guidance is born of authority or affection. If the father is stubborn and too aggressive with the child, his attitude can often be modified by his affection for the mother, who indirectly wins him over to the insight that she herself has gained. On the other hand, if the mother is too lax in discipline or over-solicitous in attitude, her resistance can often be strengthened by her respect for the father's judgment. This will often influence her to try a new course of procedure, even though at first it finds little favor in her eyes. The battle is won for the child only when the parents pull together and unite in concrete action on a definite course. Another important factor in gaining an entrée to the home is the coöperation of the school. There is seldom any difficulty in getting the ear of fathers and mothers whose children have been referred for examination by their grade teacher or principal. In the mind of the average American child and the members of his family, the public school stands as the first institution in the land of their choice, and there is no more sincere tribute paid to the teachers in our schools than that expressed by the respect with which they are regarded in the homes from which their pupils come. Overworked and overcriticized as they are, the teaching body as a whole is unusually attentive to, and patient with, the individual child problems that come to their notice.

Among this profession in the city of Baltimore it can be said that there is hardly one teacher in fifty who will not go more than halfway to coöperate in any wholesome reconstructive plan that is suggested for a member of her brood.

In connection with reconstructive work as outlined in this paper, it is also well to remember that some problems take time to unravel, and that it is not possible to change overnight grooves of thought that have been worn deep by a lifetime. Many unfortunate situations are only accentuated by hammering at them, and often after a visit or two it is found that the plans of readjustment formulated with such care are not acceptable to the family. In such instances nothing is so wholesome as to leave the situation to prove itself untenable. If the need is great enough and the plan of adjustment is practical enough, these facts will demonstrate themselves. But if the family of the child gets the impression that they are conferring a favor on worker or physician by adopting the advice offered, even though they follow it to the letter, the result is not the same as if they make the wisdom of the plan their own by discovery. In short, the goal of the adjustment program in each case has been a gradual awakening of parents and teachers to the real needs of the individual child, and the enlistment of their mutual coöperation in carrying out definite plans of action.

In reviewing the data of the follow-up notes, one is struck by the rapid subsidence of somatic incapacitation after the adoption of the new therapeutic régime. Of the 22 cases described, 18 showed a complete elimination of complaints within a period of from one to two months after the first visit to the dispensary. One of the remaining four we were unable to follow because of the family's removal to another city. The three other children are as bad, if not worse, than before their first examination by reason of our utter inability to elicit the coöperation of the parents. One of these three victims of environmental malady is a county ward of one of the child-placing organizations of this state, and hence beyond the jurisdiction of our psychiatric social research. But the passing of somatic complaints has not been interpreted as arrival at a satisfactory adjustment goal. It is unfortunate that space forbids recording in the column of follow-up notes the

story of what the rehabilitation of the child has meant in the way of insight to the family from which it comes. Here and there the facts are touched upon in a few words of tabulation, but the details of the picture could be reproduced only if it were possible to accompany each number on the charts by a complete case report in the body of this paper.

CASE HISTORIES

No. 4 was a Jewish boy of fifteen who was brought to us by his father in January, 1921. Belying his well nourished body and good color was a youth who slouched in his chair, grasped his head with both hands, and moaned aloud. "My head hurts awful. I have pains in my chest and stomach. My legs are so weak they are no good." The father, sitting helplessly by, volunteered that the boy "was never so strong always". As he enlarged upon the ills of this branch of the family tree, the dispensary record of the patient's mother was brought to the examining room. Upon it were these descriptive words written nine years previously: "Patient sits in chair pressing top of her head and moaning 'oui'." During the passage of years this woman has acquired lengthy records in six different departments of our out-patient service, where she has complained, without discoverable physical basis, of "headache, dizziness, anorexia, heartburn, night sweats, flatulence, bloody stools, swelling of legs, palpitation, pain over heart, weakness". Her two oldest children (daughters) have dispensary records of the same general coloring.

The patient made the seventh grade at fourteen years in spite of very irregular attendance. He was "disgusted" with school and left it, to become in a year's time equally "disgusted" with innumerable jobs, which he held from two to three weeks at a time till unendurable somatic distress forced him to quit.

A complete physical examination found him in excellent condition. A report of this fact neither comforted nor convinced the patient or his family.

The social background was that of the Russian-Jewish immigrant. The parents came to this country shortly after their early marriage, and were immediately swamped by crowded living conditions, a stern economic struggle, and a rapidly increasing family. The father had aspirations to establish himself as a tailor, but the family demands for livelihood have kept him at his original job of presser. The mother has apparently never had the time or the urge to develop any interests outside the household and her own bodily sensations. With the coming of the children and their problems of development, the strain of domestic relationship became acute. Under a régime of petting, nagging, scolding, and utter lack of training in habits of living or behavior, the children grew up into a band of individualists who were constantly at odds with the school. Any attempt on the part of father or teacher to insist on simple discipline sent them howling to their mother, who immediately defended them by loud arguments delivered in their presence. At what point the adaptive mechanisms of the patient and his siblings began to

take the form of hypochondriacal complainings it is hard to say. That such a pattern did crystallize, and did so by reason of certain determining factors of environment, are facts that it does not require a great stretch of the imagination to accept.

Therapeutic Adjustment

From the standpoint of therapeutic adjustment, this case has been a failure, and will probably continue to be so in view of the facts outlined above. To be sure, the patient has worked six months on the same outside job, partly, one suspects, because his father insists on the boy's contributing something toward the family budget. At the close of the day's work, he falls heavily upon the parlor sofa, where he is not infrequently found with hat and boots on, describing his symptoms to an anxious audience. So far it has been impossible to get him to say that he enjoys a single moment of his life.

No. 12 is a happier case. At the time of his first visit to our dispensary, he was a boy of almost nine years who was brought by his mother because of "weakness," "tendency to heart trouble", and "insomnia". Since birth he had been "under the doctor's care". As a baby he vomited much. He went through the usual childhood infections without adventure. At five he was circumcised and had an adenoidectomy. His schooling began with kindergarten at four. He attended school very irregularly up to eighteen months previous to his visit to the dispensary, when he was removed on a physician's advice because of sleeplessness. At the time of his examination he was still taking capsules at night for insomnia. In spite of these handicaps, he had arrived at the third grade, and standardized with an intelligence quotient of 100 according to the Binet-Simon test. The patient's living habits were satisfactory. He had a bed to himself, and went to it early. It was always possible to coax him into eating wholesome food. Underneath his complaints was a healthy boy's desire for play.

Physical examination in our children's dispensary revealed a normal body in every respect.

From a social standpoint, one found a boy who for seven years had been the only child in a home of comfort and indulgence. The father earned a good salary, but stated that in the last nine years he had spent over five thousand dollars in doctors' bills on mother and patient. The mother was always ailing, with symptoms referable to every organ in her body. In seeing and talking with her, one could almost reproduce in fancy her anxious watching for the appearance of her own weakness in the person of her only child. She carried him in her arms to kindergarten for a year, and subsequently warned his teachers to report at once any phenomena of behavior that might point to overstrain. (She herself was told that she had had St. Vitus dance as a child.) As a result, the patient at eight and a half years was bathed and dressed by his mother. He cried for what he wanted and was openly disobedient. When pressed in matters of discipline, he complained of feeling badly, and talked freely of his heart and stomach and nerves being out of order. The father's attitude was one of silent acquiescence and patience.

Therapeutic Adjustment

The first point in a reconstructive program was the elimination of drugs, insistence on regular school attendance, and avoidance of spoiling

on the part of the parents. With such a background as that described above, it seemed unreasonable to expect that parents and child could quickly revolutionize their habits of thinking and acting, even though the former accepted the principle on which the physician's advice was based. Accordingly it was suggested that the patient board in a county home to which we sometimes send children in need of habit training. The patient was installed in this home, where a week later he was found by the worker, overalled and sunburned, eating without capriciousness and sleeping without medicine.

The next step in the adjustment problem was the mother. She was given a thorough and detailed examination in various departments of our dispensary. A "grumbling appendix" was the only abnormality discovered. Operation was advised and performed, following which there was a marked improvement in feelings of bodily health and freedom from discomfort.

The family's monthly visits to the farm were unannounced, and surprised the patient in embarrassing activities of vigor. As the time for their leaving drew near, he cried, begged to be taken home, and on several occasions even hinted darkly at headache and unwholesome food. Toward the latter part of the summer, the father's business necessitated temporary removal of the family to another city. Should they take the patient or leave him in the country for the next six months? The subject was broached to us by letter, and later made a matter of conference, with the result that the parents were quite willing to leave the child in an environment that had already proved so beneficial. The following paragraph from a letter sent the father just prior to this conference gives some idea of the type of *rapport* that can exist between family and social worker: "The boy is not a delicate child, but it is the physician's belief that he needs to remain still longer in an environment where he cannot impose on those in authority over him. The stand that you and his mother have taken is an excellent one, and I can assure you that if you can bring yourselves to leave the boy where he is, you will be doing him the greatest kindness in your power. He will have regular hours and regular school attendance. These things would be difficult, if not impossible, for you to regulate when in the process of getting settled in a strange city."

"I would suggest that in your plans for W. you do not discuss them with him or before him. He is sure to take sides, and if he can get between you and precipitate a discussion, he has more than won the day."

Discussion

These two cases were selected for detailed presentation because their material embraces facts typical of all the 22 children described in this report. The contrast in their adjustment possibilities and the difficulties actually confronted in this process are strikingly similar to the problems that occurred in the entire group. Here are two boys who have in common a history of long-standing hypochondriacal complaints in a setting of parental spoiling. In both, the utilization of symptoms for the purpose of dominating the home

situation is self-evident. How much of this utilization was deliberate, and how much was the by-product of habitual action and thinking, it is impossible to estimate. The interesting feature of these cases is the remarkable likeness between the complaining reactions of the mother and those of the child. The very somatic discomfort can almost be localized area for area. Are we to put these two adult-child experiments of nature side by side and dismiss their occurrence as the phenomena of inherited nervous instability? On the other hand, can we offer helpful understanding by interpreting such manifestations as identification, reactions of a mother-son attachment motivated by jealousy, and other forms of subconscious striving after race preservation? Are the facts in the columns headed *Reaction pattern* and *Situational data* too simple to be used as etiological evidence in an examination of the complaint? We speak of a focus of infection in anomalies of joint and gland behavior, even though the eye cannot follow the processes of transition, and yet we hesitate to speak of the infectious material of daily example, even though the conduct disorder of the mother can be recovered in almost pure culture in the complaints and behavior of the child. If play activities can be used as interpretative of the psychobiology of childhood, it would seem that imitation exerts no mean force in determining the stream of childish conduct. The simple start in *playing* this or that may go over into autistic flights into the world of make-believe so delightfully perfected in detail that they become habitual refuges from the drab and concrete. And if imitation and fancy grow into more or less conscious alliance in healthy play reactions, how much more easily can their unwholesome combinations of distress come into being in the presence of suggestive daily environment! Moreover, the longer the exposure to such environment, the more indelible the reaction patterns. For this reason the ideal adjustment in the case of No. 4 and No. 12 was their immediate removal to an atmosphere of better conduct examples until the independent reeducation of mother and child reached a stage where they would be safe for each other's society. The parents of No. 4 could not be induced to make trial of such therapy, though finances for the experiment could have been procured. The

results obtained by such methods in the case of No. 12 speak for themselves.

The cases numbered 5, 6, and 13 are interesting in that they represent an acute onset of somatic complaints precipitated by scare reactions. The home atmosphere of these children was charged with somatic suggestibility that needed only a small flame, such as the health talk by the teacher or the fright aboard the steamer, to produce a combustion of panic and complaint. The course of events is well displayed in the following record:

No. 6 was a boy of nine when he was brought to our dispensary in November, 1920. He is the fifth in a family of six boys. The parents are Russian Jews who came to this country shortly after marriage and, in spite of rearing a large family, have managed to establish themselves in a small, but fairly well-paying tailor's business. The four older boys went through the lower grades and are working, so that the family budget is comfortable.

The parents describe themselves independently as "nervous" and "not so strong", but in spite of constant complaining, there has been no real incapacitation. The father of late years has been seeking doctors and patent medicines for "bladder trouble". The mother has been a frequent visitor in various departments of our Hopkins dispensary, where "palpitation" has figured largely in her complaints and "neurasthenia" in her diagnoses. The older boys glided through school and family training without acquiring the evidence of much supervision or direction. Each left school and got work as soon as he was eligible, proclaiming his emancipation from authority in ways that made him a desperate hero to his younger brothers. The parents attempted to deal with this insubordination by loud arguments, empty threats, tears, and supplications, so that one could not cross the family threshold without being definitely conscious of a spirit of contention.

The patient's personal history was relatively uneventful. There had been some enuresis and night terrors in his background, but their occurrence had either been too transient or too slight to elicit a voluntary recital from the parents. His school career included a repetition of the first grade, the result of poor attention, mischievousness, and irregular attendance. When out of school, the child played constantly on the street. He was in the habit of going to the movies almost daily, which made his bedtime about 10 P.M. As to personal traits, one could say that the patient was spoiled, but not disagreeably so. He got his own way at home by impertinence and sly disobedience, at school by clever affability, and on the street by "scrapping". In short, his behavior reactions were so like those of his brothers and the neighborhood boys that neither parents nor teachers noticed anything remarkable about him until the onset of the complaints for which he was brought to our dispensary. The story was that three weeks before, while in school, he had felt faint, dizzy, weak, his extremities had grown cold, his heart had beat fast

"like a hammer", and he had thought that he was going to faint. The feeling had passed off in a few minutes. After a second attack in school several days later, his mother had put him to bed, and while he had experienced only three of these seizures in the past week, his mother had been obliged to stay with him day and night for fear that he was going to have another spell. Her impatience with this tyranny and her fears for the child's health were reflected in the remark: "All day he hollers, 'Mother, I die!' and keeps his hand on his heart."

Examination in the pediatric dispensary was negative. Questioning as to the events that preceded these attacks brought out the fact that the day before the first "spell" in school, the teacher had given a health talk to the children, and had stressed the importance of care in eating fruit lest the seeds and pits "go down the wrong way and kill you". In some way the child got the notion that if an apple seed slipped down his trachea instead of his esophagus, it would be carried by the circulation to his heart and kill him. Childlike, he had not confided his fears to any one. The wisdom of his conduct did not seem so questionable when later on the physician began to explain the situation to the mother and elicit her coöperation. Her first impulse, on hearing the story, was to punish the child for being so "dumb" and "crazy" as to cause her all this trouble.

Therapeutic Adjustment

The patient was assured as to the impossibility of his fears being realized, and the parents were urged to ignore his complaints without ridicule, teasing, or punishment. The teacher also was more than eager to obtain and act on a new point of view. The patient had no further attacks of palpitation and faintness, but did show a tendency to cling to his mother, especially before going to sleep at night. The situation was not difficult to handle, however, and in a month's time the fears and complaining reactions were things of the past. He is now in the fifth grade, and his school life seems to be running more smoothly—perhaps as a result of increased interest and attention on the part of his teachers.

With the adjustment of the immediate child problem, our attention turned to the family group as a whole. The first step was a settling of the somatic status of its complaining members. The father was persuaded to go through the genito-urinary clinic of our dispensary. His examination revealed no abnormal condition, and he seems to have accepted this reassurance since he has not gone to any other physician for treatment and advice up to the present time. The oldest son was having friction with his employer over the amount of work put upon him. He was tense and irritable, and complained of fatigue. A thorough examination in the medical dispensary revealed a double heart murmur and myocardial insufficiency. Although there was no decompensation, his job did involve too much strain. The employer was quite willing to meet us halfway in the matter, and other work, better suited to the man's condition, was found, and has proved a success. The clearing up of this situation with the oldest son has done much to bring peace to the family circle.

The patient's mother still continues to complain, but without the drive of real worry. Her utterances on health topics give the impression of being merely social commonplaces.

Discussion

In an estimation of case material such as has just been described, the feature that stands out is a somatic suggestibility that seems to be touched off by fright. A health talk by teacher or school nurse, a movie of blood and destruction, a street scene of accident, are not easily forgotten, but form the substance of rumination and fancies unconsciously molded into the reaction patterns by which the child has been surrounded since birth. And what is the vital spot in this incapacitating distress? Is it ruminations about death and the swallowing of seeds, or the child's tendency toward the expression of somatic worries? Upon this query the program of adjustment depends. In the handling of such cases, it has seemed to us wiser not to probe for the content of fancy beyond the patient's voluntary associations, but rather to stick to the topics of family and situation upon which there has been in each case a wealth of facts. Behind the fears and complaints of the child are the fears and complaints of those with whom he is in daily contact. In the home of No. 6, for example, illness and the fear of death were perhaps the commonest associations of household thinking, and it seems only reasonable to suppose that such a fact would exert great influence upon the health conscience of the younger inhabitants. Here the therapeutic forces were directed not only against the symptomatology of the patient, but also against what appeared to be its vital etiology.

There is yet another type of case in this group that deserves mentioning, and that is the child who, after a real illness, seems loath to give up his symptoms. We hear that the patient has never been well since a tonsil-and-adenoid operation a year ago, or since falling down a flight of steps, or since an attack of measles. Inquiry into these conditions reveals nothing remarkable, either in the course of the affliction or the development of sequelæ. Yet the child continues to complain. His parents grow more anxious and watchful. He is kept out of school and taken to physicians, who grope in vain for the cause of the complaint. As weeks and months go by, parents and child become more firmly intrenched in their respective habits, until gradually the patient comes to occupy

the rôle of weakling in the household. From then on his outlook on life is fixed. The mechanism of this condition does not seem difficult when it is discovered. The illness itself involved the strain of physical discomfort and an upsetting of moods and habits of stability. During the period of incapacitation the small invalid occupied a place of importance in the consideration of the family that he had never enjoyed before. His wishes were consulted, his feelings were spared, his faults were ignored, in a way that was unconsciously gratifying to his personality. The transition from disease to former health and its drab satisfactions is not always easy in any case, but with some individuals the adjustment is undoubtedly harder than with others. To say that the child deliberately clings to his former complaints for the sake of ascendancy over the family is to make a statement for which there are no proofs. Moreover, the conveying of such an impression to family or teachers subjects the patient to the possibility of being treated as an offender rather than as a problem for adjustment.

No. 7 was a girl of fourteen who was referred to us in May, 1921, by the medical dispensary of our hospital. The story ran that in December, 1920, she had an attack of acute abdominal pain with nausea and vomiting, for which she had an appendectomy on the surgical service in February, 1921. The appendix was inflamed, but there were no complications, and the patient made an uneventful recovery. Upon returning home and reentering school, she developed the same symptoms. After several attacks a week or ten days apart, she was taken out of school and treated by a local doctor. In the latter part of March, she returned to our hospital and was admitted to the medical house service for study. All examinations were negative, and she was sent to us for examination and treatment.

The patient had been for seven years a ward of a child-placing organization in the state. No facts concerning her birth and early development were available. She had been in one foster home since coming under the care of the society, and that home is located in a small country town. Reports concerning her were always satisfactory, and the child seemed to offer no problem till the onset of the present illness. On questioning, the patient appeared to be a simple country child who presented no startling psychogenic material. She said that after she had gone home from the hospital and started to go around again, the attacks began just as they had before the operation. Her foster parents thought she should have rested longer before she went back to school. There was obviously no fear on the part of the child that her operation had not been a success. With her it seemed to be a question of breaking up an unhealthy com-

bination of somatic reaction patterns and their unconscious associations.
Therapeutic Adjustment

Since one could not get in direct touch with the foster parents, or obtain a social picture of the case, it was necessary to take up the matter wholly with the patient. To this end an attempt was made to give her some insight into the mechanism of her attacks by comparing them with other forms of habit formation and the ease with which they linger. Whether through coincidence or as a result of the hour's discussion, the patient's symptoms faded away shortly after her dispensary visit, so that a report concerning her thirteen months later contains no mention of further somatic complaints.

In formulating the material of this study no attempt has been made to evaluate any theory, or to make dogmatic assertions of etiology beyond the peradventure of a doubt. The cases were put together for the purpose of grouping biographical facts associated with hypochondriacal reactions in children, and also for the sake of showing how these unhealthy manifestations of childhood can be modified through the simple medium of dispensary contacts. We know little, and possibly never will, about the alpha and omega of nerve-tissue physiology, and hence can speak only vaguely of its transmissible potentialities. We can and do observe the behavior of human beings in part reactions and in total reactions, and in so doing arrive at conclusions involving a certain amount of predictability. Examination into the disorders of these 22 children revealed groundless somatic complaints with which the child had become infected from various sources. In every case there had been a utilization of the symptoms for personal gratification, but in many cases it was hard to say how much the child was aware of this mechanism. In all but four cases a satisfactory adjustment has been obtained through a reconstruction of environmental influences with efforts particularly directed against the focus of infection. The modifications effected have been without elaborate dispensary organization or special technique of social research. Parents and teachers have been met on the common ground of mutual interest in individual children, and their response, except in a few instances, has been such as to lay the ghost of professional fear that the public is neither able nor willing to face an honest expression of plain facts. The handling of these facts may be criticized for overemphasis

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on the obvious and concrete at the expense of any systematic effort to get at real analytical problems of etiology. In defense let it be said that a careful study of these childish complaints has spoken so eloquently for a determinism of environment that the injection of complex material of theory and conjecture seemed not only impractical, but dangerous.

CASES OF 22 CHILDREN WITH HYPOCHONDRIACAL TRENDS TREATED AT

<i>Number, Sex, Age</i>	<i>Complaint</i>	<i>Duration</i>	<i>Somatic facts</i>	<i>Reaction pattern</i>
1. B. (4)	Head "hurts sometimes, and I vomit a lot, too".	6 months.	Adenoids and enlarged tonsils.	Mother has "nervous indigestion" and headaches. Father treated for "gastritis" since gassed overseas.
2. G. (10)	Recurrent somatic complaints. Pain and limping in left foot; pain and limping in right hip; "bilious" attack; pain at site of vaccination; headaches.	Complaining reactions (episodic) for 7 years.	Negative.	Sister died of sarcoma of tibia. Mother has headaches and digestive upsets.
3. B. (6+)	Pains in "stomach"; eyes and head ache. "My lips get stiff; and I vomit when I'm nervous."	1 year	Slight amount of eye strain.	Mother always dosing "to keep well". Neurotic vomiting during her pregnancies.
4. B. (15)	Pains in head, chest, abdomen, and legs. "Weak all time."	"Not so strong always." (Father)	Good physical condition.	Mother has 6 dispensary histories with diagnosis "neurasthenia". Typical complaint paragraph: "Severe headaches, dizzy, appetite poor, sweats at night, stomach burns, bowels cramped, blood in stools, legs swell, palpitation, mouth tastes bitter, feels weak, pain over heart." Two sisters have similar dispensary records.
5. G. (11+)	Palpitation, "shaking in stomach".	4 weeks	Negative	Complaints coincident with health talk by teacher. Story was told of boy who ate hard-boiled egg without chewing, and died of "gas in his stomach".

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THE PHIPPS PSYCHIATRY DISPENSARY, SEPTEMBER 1920-SEPTEMBER 1922

<i>Situational data</i>	<i>Adjustment program</i>	<i>Catamnestic follow-up notes—September, 1922</i>
Onset of symptoms coincident with father's desertion of family and exacerbation of mother's somatic complaints.	Assist mother to understand rôle her symptoms play in child's picture; modify living arrangements (food and sleep habits). Avoid overindulgence. Urge nose-and-throat operation. Advise kindergarten as soon as child is eligible.	Headaches and vomiting disappear in 6 weeks. Parents divorced; mother working; refuses to allow tonsil-and-adenoid operation or to let child go to kindergarten. Reacts to domestic unhappiness by spoiling the children.
Father alcoholic. Continual friction between parents. No habit training at home. Family isolated on plantation. Patient - obviously utilizes symptoms to get attention from mother.	Child sent to boarding school in neighboring city. Mother to keep in touch with clinic once in 3 months.	Mother has not returned for 9 months, but writes that child has expressed no further complaints. Teachers report satisfactory school adaptation.
Onset coincident with mother's nausea during her second pregnancy. Home atmosphere charged with imaginary ills.	Elimination of sympathetic inquiry; regular meals and sleep; regular school attendance. No discussion of "symptoms" in child's presence. Glasses.	No complaint of "stomach" pains or vomiting after 2 weeks. No further eye and head symptoms. Excellent school record for past year. Third grade September, 1922.
Immigrant background (Russian Jews). Poor economic adjustment. Mother's "neurasthenia" a disappointing reaction. Father's attempts to train children aggressively opposed by mother in presence of children. Home atmosphere one of argument.	Reeducation of patient impossible in this household. Urge regular work and systematic diversion.	Patient continues to hold his own in the family chorus of complaints, though he has kept a regular outdoor job for 6 months.
Patient lives as only child in home of two old people by whom she was adopted as a baby. Has always slept in room with foster parents. Tense make-up, easily frightened. Had been put in open-air class at mother's request, because she was "a delicate child".	Reassurance of child and mother; advise latter gently to ignore the nervous fears. Patient to have room of her own and go to it unaccompanied. To be put in regular class at school. General reactions of independence encouraged.	No fears of dying; sleeps alone; doing regular class work in sixth grade; more self-assertive.

CASES OF 22 CHILDREN WITH HYPOCHONDRIACAL TRENDS TREATED AT THE

<i>Number, Sex, Age</i>	<i>Complaint</i>	<i>Duration</i>	<i>Somatic facts</i>	<i>Reaction pattern</i>
6. B. (9)	Attacks of weakness, headache, palpitation. "All day he hollers, 'Mother, I die!' and keeps his hand on his heart."	3 weeks	Negative.	Attacks coincident with health talk by teacher who told of boy who swallowed apple seeds that lodged in the "pockets" of his heart, and he died.
7. G. (14)	Headaches, pain in abdomen (right lower quadrant).	5 months.	Appendectomy 2 weeks after onset ("inflamed appendix—no adhesion"). Eye strain.	Three weeks after operation pain recurred in supra-pubic region. X-ray, medical, gynecological, and gastrointestinal examinations negative. Diagnosis: "Hysteria."
8. G. (11)	Shortness of breath, palpitation. "I feel all played out."	3 years.	Negative.	Mother has nervous indigestion (falls on floor when "gas" presses on heart). Father died of heart trouble shortly before onset of patient's illness.
9. G. (9)	"My back hurts me and my stomach is awful. My heart is bad, too. I go right down in school and fall asleep like. I get so bad my mother has to send for the doctor."	3 years.	Negative.	"My mother has plasters and everything on her back, it hurts so." Patient describes death-bed scene of her grandmother, who fell back gasping for breath. "I imagine when I get big, I'll die like her. Mother says I'm just like her."
10. G. (3)	Pains in knees to point of screaming at night. Pains never occur in day-time.	18 months.	Negative.	Father has always complained of "flying rheumatism" especially in knees and elbows; addicted to constant external and internal therapy. When not at work, he is waited on by wife and mother-in-law.

HYPOCHONDRIACAL TRENDS IN CHILDREN

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PHIPPS PSYCHIATRY DISPENSARY, SEPTEMBER 1920-SEPTEMBER 1922—Continued

<i>Situational data</i>	<i>Adjustment program</i>	<i>Catamnestic follow-up notes—September, 1922</i>
Home atmosphere charged with discord, nervous tension, and somatic worries. Father travels from doctor to doctor for "bladder trouble". One brother is congenital heart case. Mother has Johns Hopkins Hospital Dispensary record for 15 years in 7 departments; diagnosis: "Neurasthenia."	Settle somatic status of family by consistent follow-up work and reassurance, with domestic peace and higher economic status as goals. Distract patient from his complaints.	No real somatic trouble in parents, who have temporarily subsided from complaining. Patient's symptoms speedily disappeared, with no further recurrence after period of 2 years.
Patient has been ward of Children's Aid Society for 5 years. Foster parents live in country. No conduct disturbance at home or school. Patient took kindly to special considerations shown her after operation.	General discussion with patient of apparent utilization of symptoms. Eye strain relieved by glasses.	Report from case after 13 months contains no mention of somatic complaints.
Symptoms coincident with acquisition of stepfather, 6 months after death of her own father. Constant friction between children and stepfather. Following "scene" one morning patient "collapsed"; diagnosed "heart trouble" by doctor. Taken out of school; bed régime—3 pillows.	Mother reassured. Patient to take up school and normal play interests.	After period of 2 years child shows no further complaints. Excellent school record. General atmosphere at home improved. Stepfather appears surprisingly inconspicuous.
Slovenly home. Mother harps continually on family illnesses, dragging patient and herself to herb and spirit doctors. Father works out of state, but pays doctors' bills. Mother has taught patient to believe in spells and charms and spirit rappings.	Attempt to reeducate family and inject a sense of social responsibility in mother.	Mother unwilling to believe she or patient is well, in spite of repeated examinations. Family in conflict with truant officers because mother keeps child out of school for imaginary illnesses. After 2 years patient now equals mother in the variety and monotony of her somatic complaints.
Onset of symptoms associated with jealousy at birth of baby brother and patient's removal from parents' bed to crib.	Ignore somatic distress; explain mechanism of symptoms to parents. Encourage play with other children.	Pains disappeared for 2 months, and since then occur at intervals when discipline is attempted by mother in father's presence. Latter insists there is physical basis for patient's pains as there must be for his own.

MENTAL HYGIENE

CASES OF 22 CHILDREN WITH HYPOCHONDRIACAL TRENDS TREATED AT THE

<i>Number, Sex, Age</i>	<i>Complaint</i>	<i>Duration</i>	<i>Somatic facts</i>	<i>Reaction pattern</i>
11. G. (14)	Sick and giddy spells, weak and tired all the time.	1 year.	Negative except for some dental caries.	One sister died of tuberculosis shortly before patient left school because of her complaints.
12. B. (8½)	Insomnia (capsules at bedtime for 1 year); weakness "heart trouble" (doctor said).	Treated as feeble by parents and doctor since birth.	Negative.	Mother a chronic invalid, with complaints referable to every organ in body.
13. B. (7)	"Nervous indigestion", fullness in epigastrium.	18 months.	Chronic tonsilitis.	Mother complains of kidney trouble and lack of strength. Worries aloud about dying young. One sister is headache invalid.
14. G. (11)	Headaches, insomnia, "sick stomach".	2 months.	Eye strain and carious tooth.	Present illness began with 2 day gastric upset (without fever), which precipitated outburst of parental worry.
15. B. (13)	Pain in limbs, twitching of eyelids, jerking movements at times.	3 months.	Negative.	Atmosphere of watching in home. Mother fearful of St. Vitus dance.

HYPOCHONDRIACAL TRENDS IN CHILDREN 65

PHIPPS PSYCHIATRY DISPENSARY, SEPTEMBER 1920-SEPTEMBER 1922—Continued

<i>Situational data</i>	<i>Adjustment program</i>	<i>Catamnestic follow-up notes—September, 1922</i>
Mother's grief over daughter's death spent itself in anxious worry over patient. Latter found school unattractive and easily yielded to suggestion of oversolicitude.	Teeth put in order. Urge work for patient. Attempt to have mother ease up on the watching.	Patient held 2 jobs for 3 or 4 months at a time during past 2 years. Has gained 24 pounds. No further physical complaints. Mother frankly admits she does not care to have child work.
Father states he has spent \$5000 in doctors' bills on mother and patient in past 9 years. Patient spoiled. Mother carried him to kindergarten for a year. Doctor took him from school one year ago because of his "health".	Elimination of drugs, regular school attendance, reeducation of parents. Removal of patient from home environment till he gets a good start in better habit organization.	For 6 months child has been boarded on farm, attending nearby school (high second grade; to be promoted to third in February, 1923). Patient sleeps all night, eats normally, no physical complaints. Mother operated on for chronic appendicitis. Expresses no further complaints.
Present symptoms accompanied a fright that patient had while aboard a steamer. Setting was that of excitement with gastric complaints that occurred whenever patient got "worked up". Doctor had given medicine for stomach trouble (1 capsule 3 times a day for 10 months).	Advise removal of tonsils. Eliminate drugs, ignore complaints. Gently suggest that mother complain of her own ills less audibly.	Mother refused tonsillectomy, but readily banished drugs and ignored patient's complaints. Nine months from adoption of this program mother cannot tell when patient's gastric symptoms disappeared.
Patient in seventh grade, great reader and daydreamer; late bedtime; food indiscretions.	Glasses, regular habits of sleeping and eating, less attention from parents. Keep in touch with clinic.	Patient is now in eighth grade and parents consider her well. After glasses, headaches persisted for a month, and gradually faded out as new interests developed. Patient plans to be gymnasium teacher.
Patient stammers slightly, is very sensitive, easily teased by schoolmates, clings to mother. Few play instincts. Binet-Simon test 10 years. (Two years' discrepancy due to shyness.)	Reassure mother that patient has not St. Vitus dance, and urge her to ignore his body movements. Attempt to develop other interests in patient.	Nervous manifestations have disappeared. In past 2 years patient has completed course in mechanical draftsmanship. Has job with manufacturing concern. Attends eighth grade in night school. Re-standardization shows intelligence quotient of 100.

MENTAL HYGIENE

CASES OF 22 CHILDREN WITH HYPOCHONDRIACAL TRENDS TREATED AT THE

<i>Number, Sex, Age</i>	<i>Complaint</i>	<i>Duration</i>	<i>Somatic facts</i>	<i>Reaction pattern</i>
16. G. (3)	Since weaning at one year, patient has vomited 4-5 times daily.	2 years.	Retarded physical development due to unsatisfactory nourishment. Patient has been carefully examined in 2 children's hospitals, where no organic basis for disorder could be found.	Child vomited easily even while nursing. At weaning, symptoms became worse.
17. G. (15)	Irregular school attendance because of headaches, weakness; "feel bad all over".	4 years.	Eye strain (?). Tonsil-and-adenoïd operation (1920). General physical examination negative. Lungs reported "clear".	Father said to be tuberculous, but not sanatorium case.
18. G. (8)	Pains in legs, arms, and head; afraid of dark; enuresis.	"She always is sick."	Referred by pediatrician as physically in good condition.	Patient had operations for birthmark at 2 and 4 years of age; at 5 a tonsil-and-adenoïd operation. Placebos rather freely given.
19. B. (8)	"Poor appetite; rolls his eyes, shrugs shoulders, jerks hands; mouth twitches." (Mother's complaint.)	Since tonsil-and-adenoïd operation 2 years ago.	Some adenoid tissue, slightly adherent prepuce. Pediatricians do not advise attention to these things for the present.	Mother is a case of hypochondriacal depression with negative organic findings as reported by three dispensaries.
20. G. (15)	Kidney trouble, pain in stomach and back; "no life".	9½ years, or since age of 6.	From 6 to 15 years patient had records in 8 departments of the Johns Hopkins Hospital Dispensary, with diagnosis of Neisser infection at 6 years and "marked neurasthenic ailment" at 15 years.	Father died of tuberculosis in 1912 after lingering illness. Patient was treated 1 year for Neisser infection. Two sisters have dispensary records characterized by many complaints and few organic findings.

HYPOCHONDRIACAL TRENDS IN CHILDREN

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PHIPPS PSYCHIATRY DISPENSARY, SEPTEMBER 1920-SEPTEMBER 1922—Continued

<i>Situational data</i>	<i>Adjustment program</i>	<i>Catamnestic follow-up notes—September, 1922</i>
Child is only girl between 2 brothers who are taught to defer to her in their play. Parents noticed that patient did not vomit when diverted, and was worse when crossed. Household activities gradually adjusted themselves to patient's habits.	Not to be humored when vomiting occurs, or granted any concessions from family routine. Develop play with other children.	Vomited once in 8 months following visit to clinic. Put in overalls to play outdoors. No neurotic symptoms until development of enuresis—marked at present time. Parents, wise to situation, have given consent to place child in country boarding home.
Onset of complaint coincident with mother's desertion of family. Patient placed in foster home by Children's Aid. Patient unhappy in home and school life (crying, restless nights.) Foster mother insists patient has tuberculosis.	Urge eye examination and removal from boarding home.	Foster mother uncooperative about eye examination or changing her attitude toward child. Agency reports complications over disposal of case. Child out of school and in worse condition than on examination 9 months ago.
Father "nervous and trembles". Mother gets "weak and sick at stomach" when "worried". Parents worry over patient more than all the other children because she has "never been well". Child enjoys her prestige.	Mother urged to follow strict régime as to sleeping, diet, outdoor play, etc., and to ignore somatic complaints. Usual hygienic measures for enuresis to be tried first.	Unable to follow case. Family moved to another city shortly after first dispensary visit.
Domestic friction for past 2 years, resulting in separation of parents 3 months ago. Mother compensated by oversolicitude towards child. Feared he might develop St. Vitus dance. Financial strain.	Mother reassured as to her own condition and that of patient. Urged not to project her own fears on child in form of oversolicitude. Patient to country for summer. Advise school in fall.	Mother worked in country with child during summer. Cessation of complaining attitude of both. On return to city financial strain relieved by mother's earnings. Patient happy and doing well in school.
Patient is youngest of 3 children. Irregular school attendance ("ailing"), with loss of interest and gradual drifting into sexual indiscretions. Promiscuity for past 3 years. Mutual masturbation since 5.	Attempt to adjust patient to steady job, and solicit family's cooperation in utilizing her leisure for healthy recreation.	Patient working. Physical complaints quiescent. Neither family nor patient willing to receive insight into mechanism of case. Sex facts ignored by family. Patient probably continues promiscuity.

MENTAL HYGIENE

CASES OF 22 CHILDREN WITH HYPOCHONDRIACAL TRENDS TREATED AT THE

<i>Number, Sex, Age</i>	<i>Complaint</i>	<i>Duration</i>	<i>Somatic facts</i>	<i>Reaction pattern</i>
21. B. (10)	Pain in rectum only at night—dull ache lasting 2-3 hours.	At times for 2 years.	Referred by pediatrician as physically normal.	Father is sickly man, complaining of pains in different places over his body, but always does a day's work.
22. B. (8)	Pain on voiding. "My head hurts me." "My teeth hurt me."	4 years.	Dental caries.	Mother is schizophrenic with somatic harping. Regular bench holder in 6 Johns Hopkins Hospital Dispensary departments with diagnosis of <i>neurosis</i> . "Pains in head, insomnia, numbness, pains in heart."

HYPOCHONDRIACAL TRENDS IN CHILDREN 69

PHIPPS PSYCHIATRY DISPENSARY, SEPTEMBER 1920-SEPTEMBER 1922—*Concluded*

<i>Situational data</i>	<i>Adjustment program</i>	<i>Catamnestic follow-up notes—September, 1922</i>
Patient next to youngest in family of seven. Pain in rectum was an autoerotic association unaccompanied by fear.	Adjustment attempted by talking over situation with patient. Mother reassured without discussion of etiology. Attention to family sleeping arrangements.	Patient in eighth grade at 12 years. Excellent curve of activities, no complaints.
Child has been constant companion of mother, who has traveled from city to city with her somatic delusions, which have only recently taken on explosive character.	Mother committed to state hospital. Patient put in Hebrew boarding home.	Three weeks after transfer, patient had shuffled off all somatic complaints. No return of symptoms.

A STUDY OF THE UNDERWEAR INDUSTRY

WITH SPECIAL REFERENCE TO OPPORTUNITIES FOR SUBNORMAL
GIRLS *

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AMONG the many tremendous problems that modern science has brought to light there are two that are of vital importance to the social psychologist. First, how shall society deal with that class of people whose intelligence is below normal? Shall those of all grades of intelligence, from idiot to high-grade moron, be placed in institutions and segregated or sterilized; or shall society endeavor—with a certain amount of supervision—to make the morons and those of border-line intelligence self-supporting units in ordinary community life? The former method not only involves an enormous expense to the state, but there is not enough exact knowledge of the causes of arrested development, or of the special abilities of feeble-minded persons as a group, to warrant a definite statement that those of the higher grades of intelligence can never earn their living in the community.

Experiments with this problem have been until recently almost confined to the organization of colonies in connection with schools. It cannot be definitely stated that this method presents a satisfactory solution, for the colonies, of course, include only a very small proportion of the total number of those who are suffering from mental defect, and the problem of expense remains as yet unsolved; moreover, the fact that mentally defective children are happy *in* colonies is no proof that the more capable ones cannot be adjusted to life outside of a colony.

* The writer wishes to acknowledge her indebtedness to the following persons for their generous aid in illuminating many problems relating to the industry as a whole and to training in the needle trades: Mr. William Davis and Miss Molly Lipshutz, of the International Ladies' Garment Workers' Union; Mr. Hermann Mason, of the Cotton Garment Manufacturers of New York, Inc.; Miss Lucy Brown and Mrs. Solomon, of the Manhattan Trade School.

The school of thought that advocates the method of keeping subnormal young people in the community and training them to be self-supporting, so far as possible, is still in the groping, experimental stage. The experiment of placing boys on farms has worked out very successfully because of the opportunity it affords for careful supervision. The public-school systems in various cities have established ungraded classes in which they have given subnormal children short courses in sewing and "manual training". These cities have not yet published, so far as the writer knows, the results of their follow-up work, so that it is impossible to say whether these children have become self-supporting members of society or whether they are dependent upon their parents or upon some public institution. Psychiatric social workers say that it is very hard for them to place subnormal children in individual plants, because they do not know for what occupations the children are best fitted, nor do they know what plants are willing to employ them. The practice of consciously trying to adjust feeble-minded persons to the community is as yet so new that no agency has, to the writer's knowledge, summarized and evaluated the results of its work over a long period of time.¹ The question of segregation *versus* supervision in the community remains, then, still unanswered.

The second of the two problems mentioned above has been raised by those interested in labor questions and has to do with the monotonous character of modern machine industry. So much has been written on this subject that it is unnecessary to elaborate upon it here. However, it seems to the writer that all the books that deal with it seem to assume a like degree of creative ability on the part of every individual. They take as their major premise the idea that *every* person is happier when his work is varied and complex and enables him to create an artistic whole; whereas psychologists know that people differ in intelligence and in special abilities and

¹ EDITORIAL NOTE: Unfortunately extensive follow-up studies have not been made. However, Dr. Walter E. Fernald has studied the careers of 647 patients discharged from the Massachusetts School for the Feeble-minded during a period of twenty-five years (see *Ungraded*, Vol. 5, pp. 25-31, November, 1919), and Dr. V. V. Anderson, in the Cincinnati mental-hygiene survey, investigated the after-school histories of 322 feeble-minded persons in the community. (See *Report of the Mental Hygiene Survey of Cincinnati*, pp. 107-27.)

disabilities, so that work that gives one person no scope for his inventive and creative capacity may make another happy and contented.

During the writer's own experience as an employment manager, several cases arose in which a worker was given an opportunity to be transferred to a more highly skilled and interesting operation. In practically every case where no monetary consideration was involved, the worker refused to learn the new operation, saying: "Why should I change? I can make just as good money on —. I know how to do it and it's *my job*."

Of course it is possible that these workers have become so used to performing simple, monotonous jobs that this seeming preference for them is an acquired characteristic. Yet this enjoyment of monotonous jobs does exist, and if it exists among normal people, it is very possible that it exists in a greater degree among subnormal; in fact, it is a commonplace among psychologists that mentally defective persons have not the ability to adjust habits of action to changing situations. Quoting from Goddard:¹ "In automatic action the immature mind is sharply differentiated from the mature mind. . . . Having been trained to do a thing in a particular way, he [the feeble-minded person] will continue to do it that way even when conditions are changed and to the intelligent mind the fact is most obvious that it should be done differently."

Since it is a practical impossibility to revert to the handicraft system of production, in which every worker was an artisan, the obvious thing to attempt, at least, is some method of social control whereby the monotonous operations will be performed by persons who are incapable of doing anything more complex. Although no one has measured the actual amount of subnormality in industry, there must be large numbers of feeble-minded persons actually engaged in the industrial system to-day.

Of course the difficulties in the way of this attempt are almost insurmountable. First, there is the problem of training and placement. It is very much more difficult to train

¹ *Psychology of the Normal and Subnormal*, by Henry H. Goddard. New York: Dodd, Mead, and Company, 1919. p. 209.

a feebleminded person than it is to train a normal one. For instance, an experiment was made in the Vineland Laboratory to test the time required to learn an operation simulating a simple factory job. "Most normal people do the test at once." Four moron girls, of ages ranging from sixteen to twenty-seven, were given practice on the apparatus devised for about half an hour a day, with the result that an entire week passed before any of them were able to do it successfully. "And yet, having once learned this process, they could do it as easily and as successfully as any one else. The point is, they needed to be trained to do a simple task which the normal person can do without any training."¹

There are two possible ways in which a subnormal person might be trained: first, in the shop by the foreman or by the plant instructor; second, in a trade school. Scientific methods of training in the shop are used all too rarely, and at the present time shop training is manifestly inadequate. If the foreman is accustomed to training normal persons, he will be apt to have little patience with one who is slow in learning and will undoubtedly speedily discharge the subnormal learner. If he is told in advance by the employment bureau that the girl is "slow", he will not be inclined to hire her, as foremen and managers always want a "good, bright girl", no matter how simple the job may be or how often experience has shown that very bright girls tend soon to leave the simple jobs. The consequence is that an employment bureau is confronted by a dilemma in trying to place an untrained moron girl in a shop. The so-called "vestibule school", in which beginners are given preliminary training before being placed on their jobs, offers a possible way out, but unfortunately such schools have been established only by a few of the more enlightened employers and are economical only in the very large plants.

The second way in which a subnormal person might be trained for industrial work is in a trade school. Here, again, there are difficulties. In a trade school for normal persons, pupils are instructed in every process of their trade. For instance, in the garment trades, girls are taught how to make an entire garment. Moreover, by making many different

¹ Goddard, *loc. cit.*, p. 302.

models of the same garment, they are trained to adapt their methods to constantly changing situations. This a moron is incapable of doing, as it is difficult for her to learn more than one method of performing the same operation. Hence she cannot be taught any trade constantly subject to change.

Moreover, the multiplicity of machine processes cannot be reproduced in a school. If a moron girl is trained in only one operation, such as she might possibly perform in a shop, the question arises, what particular operation shall be chosen? How is the teacher to know in advance that, at the completion of the pupil's training, there will be a demand for workers skilled in the operation chosen? Even in a single plant, methods of performing the simplest operations are constantly being changed. In a group of several plants, there would undoubtedly be many different methods of accomplishing the same result. In which of these methods shall the pupil be instructed?

It is, therefore, doubtful whether the trade-school method can be made applicable to the training of morons with any considerable degree of success.

There remain two compromise solutions. If it is possible to convince a manufacturer that it is to his advantage to employ feeble-minded persons on simple jobs, he might then be induced to expend the additional outlay required to train them. However, the only advantage that could be held out to the individual manufacturer is that a moron might stay longer on a monotonous job than would a normal person. A few experiments have been made that tend to show that the labor turnover among morons engaged in monotonous work is lower than among normal persons engaged on the same jobs. In opposition to this view is the view held by Goddard that because those who are weak-minded lack judgment, foresight, and reason, they will give up a job upon the slightest provocation.¹

If the motive of financial gain cannot be utilized, there is no recourse but appeal to the employer's social consciousness. Unfortunately, experience shows that such an appeal would have little likelihood of success.

¹ Goddard, *loc. cit.*, p. 705.

The second compromise is that the state or some other agency might run shops that could specialize in the manufacture of such products as involve relatively simple operations, suitable to the capacity of morons. It is conceivable that such shops might be run on a commercial basis—that is, be entirely self-supporting—and might even make a profit. However, this raises the question as to the extent to which the state should enter the industrial field, and many complications, such as the opposition of private business and organized labor, are involved.

Realizing fully all of the above problems, the Vocational Adjustment Bureau was organized as an attempt to make subnormal girls self-supporting units in the community. The girls dealt with are all referred to the bureau by some other social agency—such as the Bureau of Children's Guidance, the Jewish Big Sisters, the public schools, the women's court, the children's court, the United Hebrew Charities, and the like—so that it is safe to assume that they have a reasonable amount of supervision. The bureau endeavors to place them in such jobs as its ever-increasing clientele offers. After intensive follow-up work over a long period of years, it may be possible to state whether such a method of dealing with large numbers of feeble-minded persons is feasible. However, in order that the placement work might be done as intelligently as possible, the bureau organized a research department with the object of securing further information to aid in the placement of these girls. Although it is evident that no definite statement can be made except as the result of a trial-and-error method, the bureau felt that much might be accomplished in the way of intelligent guesswork. It is possible to discover which are the industries that have obviously simple jobs to offer, and in which industries and plants the remuneration for such jobs is highest and the working conditions most favorable.

As an initial step in the carrying out of this idea, a survey was planned of the women's underwear industry in New York City. This industry is probably the simplest in the needle trades, and so was chosen as a good trade with which to begin. Mr. Herbert Martin, of the M. M. Martin Company, and Mr. Rosenberg, of D. Rosenberg and Company, were kind

enough to open their plants to the investigator for the purpose of a job study. A few jobs were found that might be performed by subnormal girls, and the bureau decided to continue its work in the underwear industry, so as to get a complete picture of the industry as a whole. This was done for two reasons: (1) it seemed possible that plants organized in a different fashion might present more jobs of a simple character, and (2) the information acquired by means of a survey of the industry would undoubtedly prove of great value in placing normal girls.

With this purpose in mind, the study was started in August, 1922, and finished in October, 1922. Calls were made on 70 establishments; of these, 24 had either moved to parts unknown or gone out of business, or refused or were unable to give any information. Hence 46 concerns comprise the total number included in the survey. The establishments were selected from a list given the investigator by the International Ladies' Garment Workers' Union Local No. 62. The list included both union and non-union houses, as well as some that had independent contracts with the union.

GENERAL BACKGROUND

Before entering upon the history of the underwear industry, it would be well to define the term. The expression "underwear", or "undergarment", as used in this study, does not include knitted or glove-silk underwear, for the manufacture of these articles is part of the textile industry. It does include muslin and silk underwear of all kinds. The types of garments, arranged in the groupings in which they are generally manufactured, may be stated as follows: (1) muslin chemises and nightgowns; (2) muslin chemises, muslin and flannelette nightgowns; (3) muslin chemises, bloomers, nightgowns, and sometimes petticoats; (4) muslin and silk chemises, bloomers, nightgowns, and sometimes camisoles and negligées; (5) children's muslin underwear; (6) brassières.

The manufacture of underwear undoubtedly extends as far back into history as does the art of needlework, and quantity production of underwear is probably coincident with the manufacture of dresses and suits in quantities. This industry has experienced many ups and downs as the changes in

fashion have influenced it, for while our mothers and grandmothers wore four or five stiffly starched petticoats, the woman of to-day rarely wears one. This fact, of course, has been a great blow to the underwear manufacturers, and when short, tight skirts became the style, the first branch of the underwear industry to suffer was that which manufactured petticoats. There were several firms that manufactured petticoats only; these were forced either out of business or into the manufacture of bloomers or silk underwear.

The vogue for silk underwear, arising during the period of high wages in 1917, proved a great boon to some manufacturers. It is not necessary to manufacture silk underwear in large quantities to make profits. Silk can be bought in small quantities, as cotton cannot, thus enabling the manufacturer to experiment with an idea before he goes into producing silk garments on a large scale. New firms, therefore, sprang up that manufactured silk underwear, and a great many of the old established firms added silk underwear to their line; whereupon the silk-underwear market became flooded with goods.

At about the same time the manufacturers of knitted-silk underwear entered the field; the flapper became the fashionable type, and a great many women began wearing glove-silk underwear. The sale of chemises went far down; some houses began to manufacture bloomers and so were able to carry on; others failed. When the silk market broke in 1920, a great many underwear firms failed and a great many others just managed to keep running. At the present time it seems that there are entirely too many firms manufacturing silk underwear, as well as muslin, for very few houses are running to full capacity, even though the fall is usually the busy season, and all employers complain that business has been generally bad for the last two years.

It would be interesting to know the number of underwear firms in New York City, but it is impossible to get accurate data. Nugent's *Directory for Fall 1922* lists 964 concerns under the title "Ladies' Undergarments", but this category undoubtedly includes jobbers, retailers, and establishments manufacturing negligées and knit underwear. The *Red Book* for January, 1922, lists 543, but the same objection applies to

that. Mr. Hermann Mason, of the Cotton Garment Manufacturers of New York, gives as his estimate 250, but says that of these probably 100 are small houses employing only from six to eight workers.

There are no accurate statistics as to the number of workers in the trade. Neither the union nor the employers' association has kept records of these, and both say that labor is so fluctuating that it would be impossible to keep them. Mr. Davis, Secretary of the White Goods Workers' Union Local No. 62 (International Ladies' Garment Workers) estimates the number of workers in the industry to be about 8,000, and says the union membership is about 4,000. Mr. Mason, however, says that at the present there are probably no more than 5,000 workers in the industry.

There are two distinct districts where most of the under-wear firms are to be found—one centering around Spring and Prince Streets and lower Broadway, the other extending from Fourteenth to Thirty-ninth Streets and across town from Seventh Avenue to Lexington, concentrating around Twenty-third Street. The rest are in the Allen Street district, the Fifty-seventh Street district, or far uptown.

The type of shop is somewhat dependent on the locality. Downtown, where the cheaper grades of underwear are produced, the shops are in lofts, generally dark and dingy, with old-fashioned lighting arrangements and unsafe exits. Business seemed to be duller downtown than in the Twenty-third Street district, although very few of the shops in any locality were running to capacity when visited. The method of production, machinery used, and so forth, seemed as modern downtown as uptown, but none of the downtown shops—except two of the largest—have installed any kind of "scientific management".

Uptown the shops are generally more modern and are better ventilated and lighted. They are housed in newer buildings, so that the elevators and stairways are as a rule better built and there are more of them. Uptown cheap and medium-priced underwear is manufactured, but also some very high-grade silk underwear and negligées. Here also the show-rooms are more pretentious and one would judge on the surface that the more ambitious and successful firms were

those that had moved uptown; yet many of these also were very slack or had closed down.

The investigator visited two firms in Newark. These were housed in two- and four-story brick buildings, with sufficient light and air and plenty of exits. One employed about 300 persons in the season, the other about 200. One firm in New York employs about 500 persons, while others employ as few as 6 or 10. The majority of the shops seem to employ from 40 to 80 persons.

With the exception of cutters and stock-room boys, the workers are all women. Because of the higher wages and greater amount of skill involved in the dress-and-waist industry, there is a strong tendency among workers in underwear factories to leave their jobs and "hire out" as hem-stitchers or operators in a dress shop. Hence, if a girl wants eventually to be a dressmaker, a very good way to break into the dress-and-waist industry is by way of underwear and, according to Mr. Davis, this is often done.

It is a well known fact that the needle trades, especially as they are organized in New York City, present a serious problem of irregularity of employment. As far as can be judged from the data available, however, unemployment due to seasonality seems to be a far less grave problem in the muslin-underwear industry than in the other branches of the ladies' garment trade.

The only accurate study of seasonal fluctuations of employment was made by the United States Bureau of Labor Statistics in 1915.¹ To quote from their report, "The busy and dull seasons in this industry were as follows: The first busy season, lasting from about the beginning of October to about the end of December, was followed by a somewhat slacker period of about two months; this comparatively dull period was followed by the second busy season of the year, extending over a period of about three and one-half months, when business again began to decline, reaching its lowest ebb during the months of July and August." At the present time it seems that the fall season begins about September 1 and

¹ *Regularity of Employment in the Women's Ready-to-Wear Garment Industries.* Bulletin No. 183 of the United States Bureau of Labor Statistics. Washington: Government Printing Office, 1915. p. 137.

ends a little sooner than December, as was the bureau's estimate.

By examination of the pay rolls of 30 establishments in the muslin-underwear industry, the bureau found that the difference between the highest and lowest pay rolls of the year, in terms of the average weekly pay roll, were: highest, 119.8 per cent; lowest, 70.9 per cent; the difference between the size of the pay roll at these two points being a little less than one-half of the average weekly pay roll for the year.

In the cloak-and-suit industry, these figures were: highest, 164.4 per cent; lowest, 43.2. The reasons for this greater fluctuation may become evident as we discuss the causes of these seasonal fluctuations in the needle trades.

The primary cause is, of course, the change in the weather. This cause affects the underwear industry—exclusive, of course, of knitted underwear—directly only in the manufacture of flannelette nightgowns. Although the custom of wearing them is rapidly dying out, they are still sold to a considerable extent in the country towns and in the West. This contributes directly to irregularity of employment, as the custom has grown up in many firms of employing girls to work *only* upon flannelettes, and consequently of laying them off when the slack season comes.

The contributory causes of irregularity of employment may be classified into four groups: (1) changes in styles, inasmuch as these determine the amount of manufacturing that can be done without risk in advance of sales; (2) degree of specialization; (3) scale of production; (4) quality of goods.

Changes in Styles

Until recently changes in styles have had practically no effect upon the manufacture of muslin underwear. With the short skirts, however, and the consequent cessation of the demand for petticoats and chemises, the underwear business has been greatly undermined. The underwear manufacturers are hoping that the present fashion of long skirts will do much toward restoring the industry to its former standard of prosperity. We may conclude that changes in outer garments cause, not seasonal, but annual or biennial changes in employment.

The vogue for colored underwear has had a great influence on regularity of employment. Even manufacturers who have a very definite policy of manufacturing for stock have been afraid to manufacture large quantities of colored underwear; some color might prove an utter failure. The factor of color even prevented them from buying material in large quantities. One manufacturer told the investigator that he possessed huge stocks of colored lingerie material that he never expected to use.

On the whole, however, the fact that styles in underwear last for two or three years and that the cost of material is low as compared with that of coats, suits, or dresses, tends to make the industry relatively stable.

Degree of Specialization

Although for the most part it is true that the higher the degree of specialization, the greater the irregularity of employment, yet the three plants manufacturing only brassières said that they worked steadily all the year round. There are other contributing factors to this stability, however, for (1) there is only a slight variation in the style of brassières and hence these concerns can manufacture for stock; (2) there is no seasonal peak of demand for brassières; (3) the material varies little and is of only two colors, pink and white.

Comparing those plants that manufacture gowns, chemises, bloomers, and drawers, silk as well as muslin, with those that specialize only on gowns and chemises, it is fairly evident that the former group have a greater chance of achieving stability of employment. A plant that can dovetail the manufacture of different articles may provide reasonably steady employment if managed intelligently and if the workers are trained to perform more than one operation.

Scale of Production

The figures of the United States Bureau of Labor Statistics show that in large-scale establishments employment is much more evenly distributed throughout the year than in the smaller. The range of pay-roll variation is half as large again in the small as in the large shops—96.7 points against 64—while the period during which employment varies by at

least 20 points from the average is only five weeks in the large as against twenty-five in the small shops. This is attributed to the fact that in large concerns, which keep more or less detailed cost accounts, the importance of fixed charges is recognized and hence a conscious effort is made to distribute the work as evenly as possible throughout the year. It is impossible to check up this interpretation by information gleaned in the present investigation, for no manufacturer could give accurate information about his seasons at the present time, as both large and small houses are affected by the depression.

Quality of Production

Manufacturing for stock is one of the most widely used methods of stabilizing employment. It seems to be possible only in the production of the cheaper grades of underwear, because of the danger that a season will end with a stock of expensive goods still unsold. Most of the employers interviewed who manufactured for stock made cheap or medium-priced underwear, but two manufacturers of high-grade silk underwear said that they, too, manufactured for stock. These two, however, made very conservative models and could well plan to manufacture for stock, for persons buying cheap, flashy underwear want a choice of several models, while those buying expensive goods often prefer good lines and high quality, but conservative cut. It was impossible to get accurate information as to the exact number of firms that manufacture for stock, as many managers said that the last few years were utterly unlike any other period they had experienced and those who might have manufactured for stock during normal times are not doing so now.

Related Factors

Attempts may be made by individual firms to reduce the irregularity of employment by sending their salesmen out earlier than is the general custom or by refusing to rush orders, as well as by manufacturing for stock or by dovetailing. A policy of offering high wages to balance lack of year-round employment has been suggested as a method of stabilizing employment, but high wages are apt to produce an over-

supply of labor in the trade. This practice is of no permanent value, as it creates a reserve force of labor upon which the manufacturer may draw in the rush season and hence discourages the effort to stabilize employment. Reduction of hours of labor and the union principles of double pay for overtime and of equal distribution of work have tended somewhat to discourage overtime and rush periods, but have not at all completely done away with irregularity of employment. One method of promoting year-round employment that might be followed is for a manufacturers' association to decide in advance upon the main points of the styles for the year, so that the factor of style changes might be eliminated. This method has been tried with no little success in the women's suit industry in Cleveland. It is always a question as to whether the public or the manufacturer or the buyer sets the styles; as a matter of fact, styles are probably due to the interaction of all three factors. Manufacturers might do more than is now done to stabilize the industry if it were not for the intense spirit of competition due to the existence of a large number of small shops.

Before attacking the problem of whether any operations exist in the underwear industry that subnormal girls could perform, the question arises as to whether it is wise to place the subnormal girl in an industry with even a *small* amount of unemployment. Judging from what we know of the psychology of feeble-minded persons, it seems evident that their inability to plan would make it more advantageous for them to work in an industry where they would be paid regularly all the year round and would not have to put aside part of their wages to live on during the dull period. Moreover, a normal person might plan her life so as to go into another industry during the dull season, whereas the subnormal girl has enough difficulty in learning one trade and can learn two only at a great expense of time and energy.

NATURE OF WORK

There are several factors that determine an individual's fitness for a job. The most highly skilled workman is not necessarily the best employee, and while evidence of skilled workmanship is the chief factor in securing a job, other fac-

tors enter in if a man is to hold his job. A foreman judges a workman not only on the quality of his workmanship, but also on what may roughly be called his character. A man of emotional, high-strung temperament, who is constantly quarreling, either with other workers or with the foreman, is apt to be laid off in the slack season. A man who is constantly bothering the women in the shop is a nuisance and will not keep his job long. A man who has not formed a habit of coming to work regularly, who is often absent or late on some slight pretext, will be discharged at the first opportunity.

These are commonplaces when one thinks of normal people, but are apt to be overlooked when dealing with those who are feeble-minded. It is very necessary to recognize that there are about as many variations in temperament among feeble-minded persons as there are among the normal and that general intelligence tests do not reveal the whole of any person's character, but only a very small part. This point of view is well expressed by Augusta Bronner¹: "Indeed it is quite doubtful if tests will ever offer an effective means of studying these complex aspects of mentality. The situations that in real life call the emotions into play are not easily duplicated in a laboratory; an artificial stimulus for arousing them necessarily would result in totally different reactions. How can one study experimentally love and hate as they affect behavior? Or what can tests reveal concerning the formation and results of antisocial grudges? Judgment as to defects in emotional life as well as in regard to will must be based very largely, if not altogether, upon the individual's social reactions. Recognition of individual differences in strength of the emotions, in powers of inhibition and self-control, will probably always rest mainly upon evidence gleaned from general behavior and incidental reaction, rather than upon results obtained by the use of a psychological test or series of tests."

It is possible to reason, however, in this fashion: the intellectual life controls to some degree the emotional life; hence if there is little intelligence, there will be little control, whether the emotional life is strong or weak. Unless habits

¹ *The Psychology of Special Abilities and Disabilities*, by Augusta F. Bronner. Boston: Little, Brown and Company, 1917. p. 21.

of control are formed during the childhood of feeble-minded persons, they will probably tend to be emotionally unstable. Translated in terms of work life, according to this theory the subnormal person in industry is apt to quit a job for some slight reason, is apt to stay at home if he feels slightly indisposed or if something comes up that he would rather do, and is probably more unreliable than a normal person.

Besides this temperamental factor, there is the element of manual dexterity. Manual dexterity is not directly proportionate to intelligence; that is, an individual of the moron type might have a higher degree of manual dexterity than a person of mentality above the average. A few tests have been worked out to determine psychomotor control—the tapping test and the Stenquist test for mechanical ability—but they have not yet been thoroughly correlated with the work that people have done while actually employed. We conclude that since feeble-minded people differ so among themselves both as to temperament and as to manual skill, there remains as a measurement tool only their one universal characteristic—their arrested mental development. Therefore, in our estimate of the "ability" of a subnormal girl to perform any particular operation, we use ability only in the sense of intellectual ability.

We shall, then, give a brief description of the processes in the underwear industry in a large-sized plant, and attempt to estimate the amount of intellectual ability necessary to perform each job.

A peculiar characteristic of all the ladies' garment trades is the large variety of models manufactured. This fact is applicable to the underwear industry and is very influential in determining the amount of mental ability required in an operator. This will be more evident as the processes are described. It is impossible to give a list of the processes in the order of routing through, as the routing system is different from plant to plant and even for the various types of garments. Systems of routing may be divided into two general classes: that used in houses doing "section work" and that used in houses doing non-section work. This division requires an explanation. The process of subdividing operations is still in the transition stage in the underwear

industry. It is generally the practice, however, to do section work, or work in which the processes are subdivided to a very great degree, in those plants that produce cheap underwear. No hard-and-fast line can be drawn between section and non-section work, for in some houses the work is divided in one way and in others in another way. The general order of work in a non-section house is as follows: cutting, trimming, sloping, operating¹ (including always "complete operating" and such of the following as the model requires: zigzagging, hemstitching, featherstitching, catstitching, tucking, lace running, and, for bloomers, running a Merrow machine, a bloomer crotch attachment, and a special machine for inserting elastic), ribboning, examining, and pressing.

In a section house the operations are as listed above except that the operation I have called "complete operating" may be subdivided into such component parts as these: flat-seaming and felling, which are often performed by special machines or with special "feet", yoke making on flannelettes, bottom hemming, sewing flaps on chemises, and so forth.

It is necessary to give a short description of each process in order to make clear the reasons for the conclusions as to the amount of mental ability necessary.

Cutting

Cutting involves the following operations: laying up, marking, and cutting. The cutting room is equipped with two or three tables about 30 feet long. The goods come in rolls, and a roll is placed in a machine that runs in grooves along the cutting table, unreeling the goods as it runs. Often as many as four dozen thicknesses of cloth are unrolled or "laid up". After the material is laid up, according to the orders the cutter has received, the required pattern is laid on the goods and the cutter marks it out. Then he may cut it himself with an electric knife machine, or the work may be subdivided so that one cutter marks and another cuts. Men are always employed for this job, for which there is a scale of \$35 per week, although according to the secretary of the Cotton Garment Manufacturers' Association, the average wage is about

¹ Operating in the needle trades connotes stitching on a sewing machine.

\$38. The period of training is about two years in the non-union shops, three years in the union.

Trimming

This operation consists of preparing bundles of lace for the operators. The lace must be cut into certain lengths according to written instructions; hence the job must be done by girls who can not only read, but also interpret the symbols used and follow all the varying instructions for the different models. This might be done by a girl of the high-grade-moron type, but it seems very doubtful, for the work involves calculating and planning the correct amount of lace to cut. Suppose a girl gets an order for lace for four dozen No. 619 chemises; she has a description of a No. 619 chemise and must then calculate the amount of lace necessary. She cuts this, tickets it, and ties it up in a bundle to go to the operator. The wage of a trimmer is never higher than \$20 a week, but the job can generally be learned in six months.

Sloping

Sloping is an extension of trimming. In order to make the rounded lace yokes for nightgowns and chemises, the lace has to be cut in various lengths and at certain angles according to patterns of the different yokes. This process is called sloping. Sloping, as well as trimming, requires ability to follow written instructions, to select the correct patterns, and to measure. Hence this, too, would seem rather complex for a moron. The average wage for a sloper is also about \$20, and a girl can learn the job in about six months.

Operating

In almost every factory investigated where non-section work was the rule, the practice exists in the machine processes of shifting girls from operation to operation as the exigencies of production require. This means, of course, that each girl must be skilled on several operations and machines before she qualifies as an expert operator. A learner must be potentially able to run several machines and also to make a complete garment on a regular machine. If the practice of transferring girls is very prevalent, it will take a girl about

two years to become an operator of average speed. While it is perfectly possible for a moron to learn a single process, such as hemming a nightgown, it would be very much more difficult for her to learn a great many operations and to change her habits of action with the changing models. Then, too, an operator must understand how to thread the machine and how to make simple repairs. The various processes that are included under the term "operating" are described below:

Trimming: In this connection, trimming applies to a special kind of operating. Strips of gingham or lace are stitched on to the garment with a regular machine. They may be sewed on to a straight edge or they may follow a pattern. Trimming with lace insertions or medallions is rather complex, for it may be done in three ways. A description of this one operation is given in greater detail and the reader may apply his knowledge gained by this description to the other operations.

(1) Trimming may be done on a special machine called a lace runner, into which the operator feeds the lace and the material and which makes a felled seam and sews the lace on simultaneously. All such machines require very concentrated attention, as the material has to be watched as it runs through the machine and one hand has to turn over the edge of the material as it is fed into the machine; the lace must be fed straight and not held too tightly.

(2) Lace may be sewed on by placing it over the material, so that the edge of the lace lies along the edge of the material; stitching the material and the lace together at a distance of $\frac{1}{8}$ inch from the edge; then trimming the material off close to the seam, turning the edge of the lace over on to the material, so that the raw edge of the material is underneath, and stitching along the exact edge of the lace.

(3) The material may be finished by attaching to the machine the "feller", which is a foot into which the material is fed by curving it over with the right hand about $\frac{1}{4}$ inch. The lace is then lapped over the material about $\frac{1}{8}$ of an inch, so that it lies above the right side of the material and is then stitched on. All these methods, of course, require great care, that the lace may not be torn or stretched too tightly. The worker must decide according to the style and quality of the garment which of these three methods to follow. Now if a girl of the moron type is weak in association by similarity, she may not be able to recall which method she used on a former garment of like quality, but of different cut, and would probably have to call over the forewoman and ask her advice. This would never do, for bundles of garments are given out to the operator with a model, and she is supposed to be able to go ahead without question and perform her share of work on the bundle.

Flat-Seaming: Flat-seaming is done on a special machine into which two raw edges of the material, curved over by each hand, are fed on opposite sides of the needle. Here is the same problem of keeping the edges fed straight into the machine and watching and guiding both at

once. This machine is used for sleeve-gore sewing and sleeve setting on flannel and Mother Hubbard nightgowns. Sleeve setting is considered the most difficult operation in the shop, because the edges of the sleeve and of the body of the garment are cut on the bias and hence are difficult to feed, and because the machine is extra heavy. However, this operation does not seem to require so much judgment and planning as do some of the other operations and, if once learned, might be performed by a moron. As the shops are run, however, this machine is always operated by the most skilled workers, so that there is no possibility of a moron getting a chance to try it out.

Felling: The process of felling has already been described under "trimming". The felling machine is perhaps used more than any other special machine; it sews up the side seams, the gores, the sleeve seams, and often the tops of chemises. Felling in itself is simple and easily learned, but the girl who operates the felling machine must know just which seams are to be felled on a given bundle. Here, again, it is impossible to say definitely whether a moron would be capable of doing this.

Regular Machine Operating: Many different parts of a garment are put together on regular machines. The following operations are examples: (1) yoke making, including making the front and back yokes and sewing them into the body of the garment; (2) bottom hemming, which is done entirely without a gauge; (3) sleeve-cuff making; and so forth. In houses where no section work is done, the regular operator makes a complete gown with the exception of hemstitching or zigzagging or certain other kinds of trimming, and she must know how and when to use all the special attachments. A complex job like this requires many habits of action. For instance, in hemming an operator is given three bundles of gowns; one model has a one-inch hem, another a two-inch, and the third a three-inch. Her action of hemming cannot be such an automatic habit that she forgets to change the size of her hem when one bundle is finished and she goes on to the next. A girl of the moron type might not be capable of so many modifications of an act once learned in one way. Then, again, when one person has to perform a great many operations on one garment, she must plan the order of doing them. Shall she hem all the garments first, then cut them apart and sew up the side seams on each garment; or shall she hem and sew the side seams on each one before she goes on to the next? The order of the work is dependent on the model, so that an operator must plan her method of performance whenever she gets a new model. Similarity between models is her only guide and if she does not perceive the similarity at once between this and a former model, she must go through the whole deliberative process on every bundle. Hence adaptability to changing situations is essential, and feeble-minded persons are conspicuously lacking in that quality.

Hemstitching: According to a forewoman, hemstitching is very difficult. The hemstitching machine has two needles and two "plungers", which cut the holes of the material just before the needles touch it. The operator has to watch the paths of all four, and it is said that one or more often get out of order. If the hand of the operator should

accidentally hit the front of the machine, the whole mechanism might be disarranged. Therefore, even though the machine runs slowly, it requires concentrated attention to hemstitch even a straight line, and when designs are made, greater skill is required to turn the material at the right moment. The necessity of tracing a pattern from a model and from little punctures in the goods makes it imperative that an operator run her machine intelligently and not as an automaton. A moron girl might be able to do straight-line hemstitching, but probably would not be able to hemstitch a pattern of intricate design.

Zigzagging: This machine is used in place of a feller to sew lace on to material of a very cheap grade where a rough edge may be left, and is generally used for inserting lace. The lace and material are placed under the foot, so that they lie alongside of one another on either side of the foot. Then the zigzag machine catches them both together. Of course, if the operator allows it to deviate from a straight line in the least bit, the machine will not sew the lace and material together. This operation in itself could probably be performed by a moron, but in most houses a zigzag operator is required to run other machines and to perform other operations which may be more difficult.

Featherstitching: Featherstitching is done on a slow, heavy machine, and when used around the hem of a chemise, the operator has to turn in the hem as the machine is running. A gauge is never used, making it necessary for her to concentrate on turning in the hem as well as on the complex stitch. Featherstitching is also used for producing ornamentation on a garment and the same comments may be made about the ability of a moron to do this job as were made about hemstitching.

Catstitching: The catstitching machine is very much like the featherstitching machine except that it produces a slightly different stitch. The comments made about featherstitching may be applied, therefore, to catstitching.

Merrow Machine Operating: A Merrow machine is generally used to sew up bloomer seams. It is a fast-running knife machine which produces a kind of overcasting and trims off the edge of the material at the same time. It is relatively simple—as simple as running a straight seam and perhaps more so, for the operator need not necessarily stitch exactly on a straight line. A moron could probably run a Merrow machine very easily, but it would be necessary to place her in a thoroughly sectionalized shop where she would not be required to perform more difficult operations.

Bloomer Crotch Attaching: Crotch pieces are stitched on by means of a special foot which turns in the edge of the crotch piece and helps to guide it as it is sewed on to the body of the bloomer. This requires dexterity and quick movements, but probably could be learned by a moron. Here again, however, the difficulty arises that in most shops there would never be enough work on this operation to keep one person busy all the time.

Elastic Inserting: Elastic inserting is done on a special machine, which finishes the waist bands and legs of the bloomers and inserts the elastic

by a single operation. The rubber is fed automatically into the machine from a large spool attached near the treadle, so that the operator does not have to guide it. She does, however, have to guide the material, turn in the hem, and measure the speed with which the elastic is fed, so that the waist line will be of the proper proportion. This machine is probably too difficult for a girl of the moron type to operate, as running it involves judgment as well as skill.

Shirring: Shirring, when used as an ornament, is generally done on a five-needle machine and is generally used as decoration. The extent of the shirring is designated by small punctures and the operator shirs from hole to hole. This is simple in itself, but the machine is so complex that it easily gets out of order and the operator must understand the mechanism rather thoroughly. However, a moron might be capable of running it.

The wages for operators range from \$25 to \$35 a week in the larger houses. According to Mr. Mason, the average wage is about \$25. The earnings do not seem to be graded according to the skill involved in the operation; that is, a hemstitcher who is supposedly highly skilled gets no more than a Merrow-machine operator, as a rule. As stated above, in a non-section house that manufactures medium-priced goods, it takes two years for a girl to become a good operator. In a section house, however, where one operator may merely sew on a flap, a learner may become very speedy in three or four weeks, so that she will earn as much as a girl who has been there a year. It is only very seldom, however, that one finds a factory that keeps a worker constantly on one operation. Most houses make a practice of transferring operators because of the fact that their shops are small and that they manufacture a great many different models. While it is much more interesting for an operator to learn several jobs, her wages do not rise so rapidly as they would if she learned only one.

Ribboning

Ribboning is a job that a moron might easily do. It involves merely threading ribbon through a gown or chemise, and it is possible to work up great speed in doing it. Learners are very often started on this job, and it seems so simple that there is no reason why a subnormal girl should not be able to do it. A ribboner never gets more than \$10 or \$12. Often, however, girls are promoted from ribboning to examining

and operating, and there is no reason why a moron girl should not make a start on this operation.

Examining

Examining is a combination of actual examining for quality and defects in workmanship with an operation in other industries called cleaning—*i.e.*, picking off the surplus threads. Examining involves, of course, a thorough knowledge of how a completed garment of a certain quality ought to look, what size of stitches it should have, and whether the stitches must be even, or whether sloppy stitching is acceptable. The requirements may vary on different models and on different operations, so that an extensive knowledge of the whole production policy of the house is necessary. Although examining is considered an unskilled job and pays as a rule only from \$18 to \$20, it might be too complex for a subnormal girl.

Pressing

This operation consists of pressing a completed garment, folding it up, and pinning it in place. In most shops garments are pressed, not on shaped bucks, but merely on flat tables. Gas irons are used, as a rule, although the investigator found some shops in which electric irons were used, as they are lighter and easier to handle. Pressing is comparatively simple, as most houses are not exacting in the demand for high quality. Pinning up is uniform for all models. If the technique were once learned, it seems that a subnormal girl might perform the operation. All that is required, apparently, is that the worst wrinkles be ironed out; there is no sponging or shrinking, as on men's garments. Pressers are recruited from commercial laundries, or from the ranks of household laundresses, and earn about \$20 at the most.

To sum up the discussion as to the character of the work and the ability of subnormal girls to perform it, the reader must again be reminded of the very tentative nature of the conclusions reached above. The writer has become more and more convinced that only an actual trial-and-error method can produce any results that will be reliable as to jobs that can be performed by subnormal girls. However, the con-

clusion has been reached in this study that subnormal girls would probably never be successful trimmers, slopers, operators, or examiners. In a section house a subnormal girl might easily learn to perform one or two operations, but organizations are rare in which extremely subdivided processes exist, and if a girl once lost her job in such a house, she would have an extremely hard time in finding a similar one. A subnormal girl might be a ribboner or a presser and do very well, but although these operations require little training for the normal girl, a subnormal girl would have to be trained. It seems practically certain that it is unwise to train subnormal girls for *operating*, for they can never become complete operators, and there are not enough jobs in existence that consist of performing one simple, repetitive motion. Hence some other industry might be found that would offer greater opportunities to subnormal persons.

WORKING CONDITIONS

Of the 46 establishments visited, all but 2 occupied lofts. All the buildings were supplied with elevators, but as a rule the buildings uptown were equipped with passenger elevators as well as fireproof stairs, whereas the exits in most of the buildings downtown consisted of one slow-moving wooden elevator and a wooden stairway. The lofts are generally partitioned off, so that one part is used as a showroom and the rest as a shop.

The shops uptown were as a rule much better lighted than those downtown, perhaps because the practice of building a long, narrow loft has been abandoned. The lofts uptown are generally square; consequently the light is better distributed and the workers are less dependent upon artificial light. No up-to-date lighting fixtures were seen in any of the shops. The best light for sewing machines is a bulb with a small, close-fitting globe, hanging very low down so that the light is thrown only on the work. None of the shops was equipped with these. The lights were as a rule hung too high and too far apart, and, indeed, often uncovered bulbs were seen.

The girls were, of course, seated and at the time of the present investigation there was plenty of space around them, as none of the shops was running to full capacity.

Of the 46 concerns visited, only 2 provided lunch rooms; one was the largest firm in Manhattan, the other a plant in Newark.

Apparently there are few inherent health hazards from disease or accident. It very often happens that an operator runs a needle through her finger if no guard be used on the machine, but this is not serious unless the needle breaks and part of it remains within her finger, or unless the finger becomes infected. The element of speeding up is not at present in evidence, as there are no orders, but when business improves, it may become a very unpleasant factor in the piece-work establishment.

In general, the hours prevailing were forty-four a week, so arranged that the shops were closed down Saturday.

WAGES

While the weekly wages in the underwear industry are lower than in the dress-and-waist industry, the yearly income of an operator in the underwear industry in normal times might prove to be almost as high as that of the dressmaker, because of the greater regularity of employment.

In no case did inexperienced girls receive more than \$12; in fact, of the 23 firms who employ learners, only 3 said they would pay from \$10 to \$12 a week; 17 firms said that their custom was to pay a learner \$10; and 2 offered to pay from \$8 to \$10. One even offered a guarantee for one week only, after which the learner was to go on piece work.

The facts about wages for learners comprised the only accurate wage data available. Wages differ from shop to shop according to the quality of the work and the labor policy of the individual manufacturer. They even differ in the same shop for operations of like skill, for no universal attempt has been made to classify jobs on the basis of skill and to adjust the wages accordingly.

Some manufacturers said that it was possible for an expert operator to earn from \$60 to \$70 a week. This is hardly credible, however, and according to Mr. Mason, the topmost earnings would be nearer \$35 and the average is about \$25. The wages earned under the piece-work system would appear to be no higher than those earned under the week-work system.

Of the 46 firms visited, 29 paid their operators by the piece, 12 by the week, and 5 paid partly by the piece and partly by the week. It might seem possible that a working hypothesis of the reasons for operating on a week-work basis would be that in the manufacture of high-grade merchandise, operators are more careful if on week work. This may be the case, for of the 12 firms operating on a week-work basis, 5 were manufacturers of high-grade silk underwear. However, in this group were 2 manufacturers of medium-priced muslin underwear, 2 manufacturers of children's underwear, which is of medium grade, and 2 manufacturers of brassières. In a group of 29 firms that pay by the piece, only 5 manufactured a high-grade silk underwear, and 2 out of this 5 also manufactured muslin underwear. This would tend to support the general theory that manufacturers use the piece-work system to get quantity production.

One feature usually found present in the garment trades is the system of home work. The underwear industry seems to be quite free from this evil. This is probably due to the fact that there is so little hand sewing on underwear.

EMPLOYEES

The predominating age of operators in the underwear industry is from sixteen to thirty years. The examiners and pressers are generally older women of from forty to sixty years, in spite of the fact that it is necessary for them to stand at work all day. Learners are often started in as examiners and then later may be transferred to a machine. The manufacturers seemed to have no decided preference for girls of any particular age, although none was found willing to take girls on part time.

It is impossible to generalize as to the preference of the underwear manufacturers for workers of any particular nationality. The employers, who act as plant managers in the majority of establishments, are almost without exception Jewish. Very few of them, however, show any preference for Jewish girls as workers; in fact, only one employer said that he definitely preferred Jewish girls. Two employers said that they preferred Italians, as they could do work of a higher quality, but the rest were not at all particular as to

the nationality of the workers. Colored workers were observed in several of the shops; they are generally taken on as pressers. There is no one predominant nationality in the underwear industry, but most of the workers seem to be Jewish or Italian in the shops in New York City. In the plants in Newark the workers are generally "American"—that is, of German, English, or Irish descent.

TRADE ORGANIZATION

The employers' organization in the underwear industry is the Cotton Garment Manufacturers of New York, Inc. It includes in its membership about 75 of the larger firms that manufacture both silk and cotton underwear. The association endeavors to keep in touch with the state of the market and works out the administration of the agreement with the union.

The employees' organization consists of two locals of the International Ladies' Garment Workers' Union: the Underwear and White Goods Workers' Union Local No. 62, and Cutters' Union Local No. 10. These unions signed a contract with the Cotton Garment Manufacturers for the period from March 24, 1921, to March 23, 1923. The main provisions of this agreement relate to hours, wages, rights to organize, provisions for adjusting grievances, and stoppages.

Hours: It is agreed that the hours shall be forty-four, arranged either in six working days or in five.

Wages: There is a graduated scale for wages of all learners arranged so that the starting wage is \$10 and the wage after the first month is not less than \$12. For operators, the wage after three months is not less than \$15, after nine months not less than \$18, and after one year not less than \$20. For ribboners, examiners, and lace cutters, the wage after three months is not less than \$13.50, after nine months not less than \$15, and after one year not less than \$17. There is a clause stating that examiners are to be paid by the week only, and there is also a clause that ribboners, if paid by the piece, should be paid on the basis of \$.40 per hour.

The employer may put any number of his employees on piece work. The piece rates are settled between the firm and a price committee of not less than three or more than five

from a particular shop. If the two sides cannot agree upon a price, then an average experienced operator makes a test and the piece price is retroactive. A test is rarely resorted to, according to Mr. Mason, as it takes a long time and is apt to be inaccurate.

No reduction of prices is allowed during the life of the agreement.

Overtime shall be paid piece and week workers at the rate of double time. This provision seems not to be very strictly enforced during this period of depression; the writer found several so-called union shops whose managers said they paid only straight time for overtime.

It is agreed that during slack times work shall be distributed as evenly as possible.

Right to Organize: The right of the union to represent and organize the workers is recognized and the manager of any factory that is 60 per cent organized shall direct that all workers become members of the union.

The union has not, so far as the writer knows, organized every shop belonging to the employers' association; in fact, of the 46 shops visited, 15 were union shops, 19 were non-union, and 12 had independent contracts with the union. According to the information given by the union when it supplied a list of firms to the writer, of the total of 95 establishments listed, 32 were union, 36 were non-union, and 27 had independent contracts.

Methods of Adjusting Complaints: Most differences, such as disputes over rates and discharge cases, are settled between the manager of the union and the executive secretary of the employers' association, according to statements made by both parties. But provision is made in the agreement for a grievance board, consisting of four representatives from each party, to hear and determine all claims arising under the agreement. It is, of course, a tribute to the managerial ability and good sense of both parties that meetings of the grievance board have been rare.

Stoppages and Lockouts: It is agreed that there shall be no stoppages or lockouts pending the determination of complaints or grievances during the life of the agreement.

The advantages of a union agreement to the individual worker, such as protection against rate cutting and discharge, are obvious and need not be discussed in this report. However, it is only just to say that if the general statements of the manufacturers about wages adequately reflect the true conditions, wages are no higher in union shops, and in fact the non-union shops often seem to pay better and to give steadier work. The forty-four-hour week also is common throughout the trade. These conditions may, of course, have been brought about by union activity, and probably have been, but so far as wages and hours and physical working conditions go, an individual non-union shop may offer as good an opening for a learner as a union shop. It is true that she may be laid off in slack times and that her wages during apprenticeship are not guaranteed, but on the whole non-union shops are more willing to employ learners, as in organized shops experienced operators are employed if workers are needed. Out of the 23 firms that were at all willing to take on learners, 13 were non-union, 7 were union, and 3 had independent contracts with the union.

TRADE TRAINING AND APPRENTICESHIP IN THE TRADE

In view of the fact that a trade school exists for training girls in the various branches of the needle trades, it is important to ascertain the attitude of the employer towards the girls trained there.

A brief description of the training given in the Manhattan Trade School in relation to the underwear industry is in order. A girl who specializes in a course called "garment machine operating" may at the end of the two-year course, or even after a shorter period, be placed as an operator on dresses and waists or, failing that, on underwear. According to the placement secretary of the school, girls go into the underwear industry only when there are no vacancies in the dress-and-waist industry, or if they have not turned out to be very good operators. They prefer the dress-and-waist industry because it offers a better financial return and also more interesting work.

As a means of choosing pupils for the school, a series of

vocational tests are given¹ and the girls are advised not only as to whether to go to the Manhattan Trade School or to high school, but also what course at the Manhattan Trade School they are best adapted for. The subject matter of the tests is simply the initial process of teaching any given operation. These tests are designed to discover a girl's ability to grasp the intellectual content of the operation and to coördinate her actions accordingly. A test of this sort, of course, is fair only for complex trades, where a certain amount of intelligence is necessary; for a person might be slow in learning a single operation, yet if kept on that one operation, she might eventually be a speedy, reliable operator. However, if a girl is to become a complete operator, ability to grasp instructions readily and act accordingly is absolutely essential, and so the test has been found practicable and just, for the results have been correlated with the success or failure of the pupils in the school. Pupils desiring to learn operating are tested for seven and a half hours, and are shown control of power, stitching of straight lines, stopping and starting accurately, stitching curves, turning corners, making simple seams, and hemming a handkerchief.

If a pupil enters the course in garment machine operating, she begins on bloomers, then makes a smock, and so on, up to complete operating on dresses. No underwear except bloomers is made in the operating course. There are a few special machines, but not by any means the great variety observed in the shops. The investigator saw regular machines, machines with feller attachments, hemstitching machines, and tucking machines only. An operator must learn how to make a complete garment in the school, and thus subnormal girls are definitely excluded. They have been tried often enough in the past, and have generally failed as good operators. According to Miss Lucy Brown, who is in charge of the vocational testing classes, a border-line girl could learn to do a simple process like tucking, and perhaps get a job doing just that. As this report has shown, however, such jobs exist only rarely, and of course it is well for the average girl that they do.

¹ See *An Attempt at Vocational Testing*, by Edna Wallenstein. *Educational Review*, Vol. 62, pp. 392-401, December, 1921.

A girl trained in the Manhattan Trade School goes out, not as a "skilled" operator, but as a trained operator; she understands how to thread and run a power machine and how to put a garment together. She can follow complex instructions given at the beginning of a garment and keep them in mind until the completion of the garment, or until the completion of the lot of garments. All she has to learn when she goes into a shop is the particular methods used in that shop. She may, however, have to learn to operate other special machines if she goes into an underwear shop, but this is much easier when once she knows how to operate a regular machine.

The attitude of employers to the Manhattan Trade School girls varies from the opinion of one man who said that he tried out a "bunch" and that their quality was so poor he let them all go, to another man's very excellent appreciation of the greater learning capacity of the trained girl. Most of the manufacturers interviewed who knew of the existence of the Manhattan Trade School used it, and preferred girls from there rather than learners who knew nothing about a machine.

The initial wage for graduates of the school was found in one establishment to be \$15. In most concerns, according to the placement secretary of the school, the initial advantage to the trained girl is reflected in a difference of \$2, but just now, because of the depression, it is difficult to judge the immediate monetary value of the training.

Most of the factors in a discussion of apprenticeship in the trade have been touched on elsewhere, but it is well to summarize them here. The union does not limit the entrance of learners into the trade, and it makes provision for a steadily increasing wage. (See page 96.) Girls may be taken on at sixteen or under and are generally started as ribboners or examiners; after a few months they may get a chance to learn operating. The beginning wage is \$10 as a rule. (See page 96.) No manager willingly gave an estimate of the length of the training period, all saying that it depended upon the individual girl. In non-section houses, where a girl learns every kind of operation, the consensus of opinion seemed to be that a girl became expert in two years' time. In a house making cheap muslin underwear and teaching a girl only two or three operations, the manager seemed to

think that a girl could make good money after one or two months. These are the two extremes, and of course the actual amount of training time necessary depends upon the girl and upon the kind of establishment she enters. In none of the shops visited is there a vestibule school; all the teaching is done by the forewomen.

The high-grade houses, of course, offer the best wages and the most interesting work, and in fact there is some chance of a girl's working up to be a designer and earning from \$75 to \$100 a week. A great many underwear houses, however, have no designers. The underwear industry, as has been said, is often used as an approach to the dress-and-waist industry, and of course an operator earns more on dresses than she does on underwear. An operator on dresses, however, never can become a draper or designer, as these positions go to the hand sewers.

VOCATIONAL RECOMMENDATIONS

To sum up the possibilities of this trade as a life work for normal and subnormal girls is not an easy task. For a girl with a grammar-school education, who is an average, normal girl with a certain amount of creative ability, but not a genius, the underwear industry offers certain advantages. It provides much steadier employment than any of the other needle trades, short hours—in comparison with the candy or cigar industries—and an opportunity for creative work, especially in the better houses. However, the wages are not very high, and the shops are often dingy and unsanitary.

For the exceptional girl, who is gifted with a fine sense of color and of line, the opportunities are limited, and it is very evident that she could go much farther in the dress-and-waist industry.

For the subnormal or border-line girl the opportunities are also somewhat limited, not because of the actual operations, but because of the fact that the majority of shops are small and a girl must of necessity be very adaptable and know how to do more than one job. A subnormal girl might be very happy as a ribboner, a presser, or an operator in a section house, but so long as the majority of the shops remain small, it is hardly advisable to train a girl for an industry in which there are so few openings.

AFFECTIVE FACTORS IN VOCATIONAL MALADJUSTMENT

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ON the basis of the army mental testing, Goddard emphasizes the importance of getting the "C" or average man into the "C" or average job, the "A" or very superior man into the "A" or very superior job. This is in line with the popular tendency to consider but two kinds of work or people, round and square. But the vocational problem is not so simple as either the scientific or the popular language implies. The sociologist will undoubtedly suggest that the "C" man may want "A" job rewards, while the psychologist may question whether, when the intelligence is correlated with the position, other factors of equal importance may not enter the problem of vocation adjustment. While recognizing the tremendous importance of intelligence¹ in determining the individual's vocational level, we have found in many cases that it is the affective condition of the individual that determines or prevents his adjustment to his occupational life.

We have discovered, among the men applying for counsel,² many whose intellectual capacities were out of harmony with their occupations, and have frequently found as a result what might be characterized as a healthy irritability toward their vocational situations. On the other hand, those who present affective problems show a far stronger tendency away from the normal, and in long continued disturbance or distress a more decided probability of becoming psychopathic. It may well be that the intellectual factor in vocational mal-

¹ In this connection, a study of some three hundred men is to be published later.

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adjustment, particularly as it relates to the superior man in the inferior position, is of greater significance to society in connection with intellectual and social wastage, while the affective factors in vocational maladjustment are of greater importance in the life of the individual. Still, it may be considered that the intellectual problem, with its two possibilities—the man whose position puts too heavy a strain upon his mental capacity and the man whose position does not permit the exercise of his full powers—may develop into an affective problem, but this is merely to say that the various factors affect the individual, not in distinct and separate lines, but in overlapping circles.

Emotional levels are various, and the normal emotional level may be different for different individuals. The problem of the vocationalist becomes, then, not merely that of routine advice concerning occupational fields, training requirements, remuneration, and the like, but in many cases that of attempting to assist the individual to restore himself to his normal level of affectivity, whatever it may be. If we consider, as does Watson,¹ that each individual has a normal, a high, and a low level, the vocational counselor seems to be confronted most often with the problem of raising the level, because of the large number of individuals on a depressed level who come for counsel. However, individuals on an excited level are not infrequent nor are individuals with violent fluctuations between the two levels.

Occasionally a *manic* state or one of *depression*, to put it in terms of psychopathology, is so long continued or so extreme as to require the attention of a psychiatrist. However, in vocational counsel, which can be terminated at any time by the subject, it may require considerable tact to prevail upon him to see a specialist, though such service be provided free. Even when this is done and a diagnosis is returned that, let us say, the individual is of definite psychotic tendency, the practical problem of adjusting to the individual situation is still unsolved. Sometimes the individual may be fairly aware of his condition, may even say that he is "headed toward a nervous breakdown", and yet feel himself caught in a com-

¹ See *Psychology from the Standpoint of a Behaviorist*, by John B. Watson. Philadelphia: J. B. Lippincott Company, 1919.

plicated situation from which nothing less than such a "break-down" would procure his escape. The following case somewhat exemplifies this condition:

Case 1. Age twenty-eight. Nationality, English. Education, public school and numerous specialized courses. Discharged from army because of nervous disability following "shell shock". Intelligence score¹ 155, rating A. Had pleasing appearance, was extremely vigorous and enthusiastic, open-minded and tactful. Business, brokerage. Having lost one fortune, was engaged in Wall Street as a salesman, which position he appeared to be filling very successfully. Vocational ideal was engineering, although he did not know exactly what an engineer does. Before applying for counsel had become very unsocial; was extremely nervous, as well as in poor physical condition. Showed decided shrinking from making new contacts where he would be likely to appear at a disadvantage. Suffered from feeling of inferiority that made him constantly attempt to demonstrate ability by telling of previous accomplishments. As a result of business failure, had broken engagement with fiancée because he could not give her the home and financial position his ideals demanded. Was developing moral reaction toward his occupation and had already resigned several times.

Counselor prevailed upon him to continue in his salesman position until he had informed himself as to other fields of interest. He was given catalogues and books and introduced to men who were successful in the occupations in which he showed interest. It was further suggested that he give up his expensive apartment and in every way adjust his standard of living to his lowered income; a regular schedule of exercise and social diversion was also suggested. After some weeks of following these suggestions a calmer attitude resulted and, to the counselor at least, the manic symptoms, which had made his presence objectionable to other members of the office force, appeared to be eliminated. Subject decided on construction engineering as a vocation, concluding that the building of something would be more satisfying than financial matters. He concluded to stay at his job until plans for training and entering the new vocation could be perfected. The satisfying vocation was put by the subject ahead of marriage plans.

The young lady in England, to whom he had been engaged, had meanwhile become concerned over his condition and insisted that she did not care for the expensive mansion and motor cars with which he wished to endow her and that she was coming over to marry him. Subject refused this sacrifice, although at the cost of considerable emotional disturbance; upon which the young lady became ill, so that he felt compelled to agree to what she wished. Her decision to come to America at once, coupled with his dissatisfaction with his job and with his feeling of inferiority over his financial situation, upset all the calmness

¹ All testing was done with Army Alpha, "Business Alpha", Army Performance, or the Stanford-Binet. The latter two were used chiefly for comparative purposes. Scores and ratings expressed in terms of Army Alpha: A, very superior; B, superior; C+, high average; C, average; C-, low average; and so forth.

that the preceding weeks had wrought. He returned to his former trick of resigning his position one day and accepting it again the next. He declined an opportunity made for him to enter construction work. His dreams showed obsessions connected with his feeling of inferiority and with the repression of his sex desires. At a melodrama he screamed out loud. Taking tea with a young lady friend of the family whom he knew but slightly, he concluded that the waiter had made an insinuating remark about the purpose of their presence in the hotel, albeit it was but four o'clock in the afternoon. A fight followed, after which for thirty minutes he felt "grand". After this period of elation, a depression set in so great that he failed to keep a dinner engagement, could not eat, and when, twenty hours after the fight, he sought out the counselor, he was in such a state that persons who saw him for the first time flatly remarked that he was "crazy". After a couple of hours of quiet talk about the "insult" he and the young woman had received from the waiter and about his situation in general, the tension relaxed and he returned quietly to the scene of the fight. Presently his appetite returned; he was given a few mechanical tasks in a friend's house, which he performed with alacrity; he became sufficiently social to talk upon some subject other than himself; and after several more hours departed in a quiet, rather sleepy state, planning to begin his married life at the end of the month.

This was a man of intelligence, of considerable experience in many countries, of good social training, making a very fair living and deeply attached to his fiancée; but he showed himself entirely unable to adjust between his ideals of vocation and position and the reality. Any additional stimulus seemed sufficient to disturb his equilibrium, to affect his emotional level. He was to a considerable degree aware of his condition and strongly desirous of improving it, but saw no way of escaping the demands either of his love or of the vocational situation.

We have said that depressed emotional levels appear to characterize a very great number of the men applying for vocational counsel. This does not imply that the same thing is proportionately true of men in general, as without a doubt the emotional disturbance has helped to bring about the vocational maladjustment and so has operated to send a large number of such individuals to the counselor. This depression may arise from a sense of inferiority, which is temporary or which has grown steadily over a comparatively long period. It is frequently neither possible nor necessary for the counselor to determine whether this *minderwertigkeit* has an organic basis or operates entirely according to the Adlerian characterization. Without at all disregarding the importance of the psychoanalytic concept, it was felt that this feeling of inferiority was often called out by definite, perhaps trivial factors in the environment, the removal of which would restore

the individual to his usual functional position in his occupational and social world. In some cases this presented a fairly simple problem.

Case 2. Age twenty-four. Nationality, American. Education, two years high school and business school. Army history, not overseas; in camp life in this country very successful in meeting discouraging factors and in maintaining attitude of pleasantness in all army situations. Intelligence score 138, rating "A." Occupation, stenographer, secretarial experience for four years prior to enlistment. After returning from army to old firm, he was given advancement as private secretary to president. In this position he was unable to make good after a trial of four months, although working overtime to the limit of his capacity. Became very nervous over situation and was finally returned to general stenographic work with no reduction in salary in same firm.

Subject was thoroughly discouraged over his situation, but saw no way out. Business men urged that the thing he must do was to stick to the firm, prove that he had the right qualifications, and regain the lost position, although subject felt this could not be done. The vocational counselor discovered that sales work had always been extremely interesting to the subject, and a plan was made for him to enter this field through the medium of stenography. A position was secured and taken at a reduction in salary. A plan was outlined for the completion of high-school education.

High-school work is now completed. After year and a half with the new firm, subject has been promoted several times and is now in charge of other men and is displaying excellent ability in his chosen work. His emotional attitude, due to failure in former firm, had definitely inhibited any improvement; in a new environment he lost his discouragement, increased his efficiency, and returned to his normal emotional level.

Other individuals seem to manifest a genuine "inferiority complex" which affects all their relations and prevents their making adjustment to the vocational requirements. With some of these subjects it was frequently found impossible to do much beyond giving the physical examination and offering suggestions as to treatment or exercises for improving their physical condition.

Case 3. Age twenty-two. Nationality, American. Education, two years high school and business courses. No army history. Intelligence score 183, rating A. Occupation, bookkeeper, three years' experience. At all interviews subject indicated a retiring tendency, showing inability to approach a problem and bring it to a conclusion; he gave little evidence of his high intelligence as shown on the mental testing. He proved to be extremely sensitive. It was found desirable to have two counselors working with him in order to keep in touch with him. One found that because the other at times seemed busy and failed to give absolute attention to the particular problem discussed, the subject became fearful of intruding and stayed away. This situation arose several times.

Subject was placed twice by the placement bureau, but each time could not be brought to a sufficiently aggressive attitude to make any contacts for himself, so that all appointments had to be made for him.

Case 4. Age eighteen. Education, public-school graduate. Intelligence score 117, rating B. Occupation, clerical, three years' experience. Very nervous, with strong belief in his own incapacity for achievement, unwilling to attempt anything, highly conscious of his own nervous condition. Quite listless and unorganized in plan, although coöperative and a fluent talker when contact was secured. Could not be brought to believe his capacity for any work very high or to accept himself as equal to his intelligence rating.

Case 5. Age twenty-six. Intelligence score 95, rating C+. Occupation, clerk, shipping and stock. Subject was placed by the placement bureau five times, at intervals of approximately six months; seemed unable to keep position for long period. Gave up position or was discharged each time upon occasion of anger and excitement. Many or complicated instructions caused him to feel overloaded and persecuted. When excited, he would bat his head against wall (in public place) and weep. Was extremely sensitive and generally nervous. The psychiatrist called into consultation reported constitutional inferiority and paranoid personality. Subject was considered non-institutional case unless he became violent, which seemed unlikely.

Investigation of his family found mother neurotic. When her son was discussed with her, she became resentful and would permit neither further investigation nor advice; refused to take her son to the country, where he could, it was believed, handle simple outdoor work and maintain himself without supervision. It was judgment of physician that son would be better away from mother, but this could not be effected.

Case 6. Age forty-three. Education, to seventh grade in public school. Intelligence score 65, rating C. Occupation, marine engineer for twenty years. It could not be determined whether feeling of inferiority was original or was conditioned in him by the attitude of his wife, who, according to subject, was very superior intellectually and of a dominating disposition. Wife regulated his sex expression and refused his desire for a child.

His duties at sea often left him but a few days a year at home, so it became his custom to turn over all his money to his wife, who purchased home and said she made payments upon it, although she would not give any accurate information as to deeds and payments. On one return he found eight-months-old baby whom wife stated she had adopted, although there were no adoption papers. Growing belief that wife was playing with him. On another return found distant male cousin living in his home and established there with attitude of owner. Each time wife took all money away from him by disagreeable methods and sent him back to sea. Subject wished to secure work on land, to find out something about his financial situation, his adopted child, whom he likes, and so forth, but was afraid to go home for fear his wife would be able to persuade him to give up all the money he had left.

Subject showed pathetic admiration for his wife, strong feeling of her

power over him, and a desire to return to her, counterbalanced by a determination to establish himself on land and to find out just what situation she had brought him to.

In some men applying for counsel there appear infantile reactions and childlike faith in advice, and it is upon such as these that the quack character analyst practices his arts.

Case 7. Age thirty-one. Education, two years of high school and two years of studying drafting. Intelligence score 124, rating B. Occupation, government draftsman.

The subject liked drafting very much, but was discouraged because he saw no further advancement for him under the government. He went to a "character analyst", who recommended vocations as follows: superintendent of shipping, corporation traffic management, superintendent of stores (industrial), office management. Written statement made by the analyst: "With the high development of the will, I do not see how you can work happily at a drafting board or making models where the intellectual elements are called into much more activity than the will elements. Your nature demands intensive directive action and until you become engaged in some such work, I do not anticipate contentment."

Thinking to secure an opportunity to exercise those "will elements" and accepting the statement that he could not be happy at a drafting board, although he had always believed he liked drafting, subject gave up the security of his position and entered the sales field. This finally resulted in a canvassing position that was very disagreeable to the subject and that brought in much less money than he had received in the government position—barely enough, indeed, to maintain his family. He wished himself back at the drafting board, and in this discouraged frame of mind came to the counselor.

After several interviews with the vocational counselor, the subject showed himself confirmed in the desire to be guided by others by urging the counselor to tell him what he had "better do".

Sometimes it is possible to break up a belief in the predictive value of phrenology, physiognomy, astrology, and the like, or what is perhaps even more important, to bring the subject to see that his problems must in the last analysis be solved by himself, with the aid of whatever exact information can be given him by others. In some cases, however, visiting the character analyst seems to have become a habit, satisfying, perhaps, certain narcissistic tendencies and offering further material for daydreaming.

Case 8. Age fifty. Education, public school till age of fourteen. Mental rating not secured, estimated intelligence high B. Occupations, salesman, sales manager, adjuster of commercial claims in credit field, and collector. Excellent health, superior physique. Financially successful, liked the field of salesmanship; nevertheless he had always felt

that if he could but find the exact and proper vocational niche, he would be satisfied for the rest of his life, that he would then no longer feel a striving for accomplishment, but would sail on smooth waters. Family relations always satisfactory, but constantly troubled by this vocational problem.

Subject had been to a character analyst in 1912, in 1915, and to two in 1922. The last analyst told him that "your vital temperament gives you your arterial circulation" and that he should be a public speaker if not a politician; that he should be in construction work; that his executive talent was strongly represented through his large destructiveness; that he could handle men and read people like a book; that he could become an efficiency engineer, an inventor, a consulting lawyer advising young men how to run their business; that he had all the requirements for a decorator, an art critic, or a connoisseur of antiques; that he made an excellent host; that he should cultivate his secretiveness, control his sublimity, and he would be a benefactor to all.

The counselor could not compete with this highly flavored menu, although he attempted to show the subject that his striving for achievement was not unnatural and that there was no particular square or round hole into which he could fit himself with perfect satisfaction.

Individuals apply for counsel whose emotional discouragement is evidently rooted in peculiar habit acquisitions. Of such a type was the case of a highly intelligent young man, the son of deaf-mute parents, who had not learned to speak till a late age. He was found to be doing his *thinking* with his fingers and then slowly and laboriously translating the finger movements into laryngeal and finally verbal expression.

Locality fixations were encountered at times, as in the case of an assistant bookkeeper who felt a peculiar fascination in the docks and stated that every occupation he could desire to follow would keep him around the docks, where he now goes in his spare time to sit and watch the work go on and the steamers pass by.

The emotional depression may likewise be based upon organic defects, as in the following cases:

Case 9. Age twenty-two. Education, completed high school. Intelligence score 118, rating B. Studying and attempting to work out vocational plan. Deaf and lip reader. Test showed high degree of accuracy; greatest weakness in general information, due to lack of contact with other persons. Subject appeared ambitious, industrious, and of pleasing personality, but understimulated because of his defect.

Case 10. Age twenty-six. Education, sixth-grade public school at age of fifteen; out of school much of time because of illness. Intelligence score 41, rating C-. Medical history showed at age of three serious illness, measles, abscess in head. In his seventh year the sub-

ject became physically incapable of school work. He found it difficult to concentrate, was intensely exhausted after mental work, was not strong in physical work. Father died of cancer, sister of pneumonia; longevity in family on both sides. Subject had heart trouble which had caused him to train himself in repression of activity.

Subject had decided mechanical interests and thought electrical or wood-working occupation would interest him; disliked work with people. He tried farm position for a year, liked it, but came back to city because of mother's dislike for locality. Interests remained the same, but he had no opportunity to train for either because of necessity of earning living. He continued to suffer from exhaustion after either physical or mental work.

Excessive individualism may lead to rebellion against authority, to a feeling that any form of direction constitutes an infringement of personal liberty, and an attitude of irritation or a chip-on-the-shoulder-dare-you-to-knock-it-off manner that strongly interferes with either social or vocational adjustment. Numerous men applying for counsel and for placement seemed to belong to this group. One sought outlet for his feeling in excessive sarcasm and tried to protect himself by offending the other fellow first; in spite of his strong inability to get along with people, he had a definite desire to be a salesman. Another was accustomed to revenge himself upon society, his boss, and his fellow workers by periodic "flare-ups"; in his case several salutary discharges appear to have worked an improvement at least in behavior. This man had an extremely high intelligence rating. Another, with a strong ideal of individualism, felt oppressed because he had a personal connection with the employer and because he was not allowed to carry out his own ideas of efficiency. Although of very high intellectual ability and a conscientious worker, his efforts were practically nullified by his emotional reaction; he became excessively irritable and found it necessary to sever his connection with the firm and take work that permitted him greater individual direction. Others betray this excessive individualism chiefly in their homes, and an unfortunate home situation then affects the vocational problem.

Case 11. Age nineteen. Intelligence score 121, rating B. Clerical experience for five years, as timekeeper, pay-roll clerk, and brokerage clerk; always held positions paying twenty-five dollars or more. After a short period in the army, his parents secured his discharge because of youth. Conference with parents brought out the fact of their inability to influence or control son. Boy declared that he had no freedom at

home, refused to tell parents anything, and insisted on doing whatever he wanted to do. Parents tried to make him contribute part of his salary to upkeep of home and he insisted that they would not leave him enough to get along on.

Two counselors worked on this problem, trying to secure a meeting point between parents and son. Boy was placed several times, but showed himself entirely irresponsible about getting to work, asking for time off, and so forth. In each place he was considered a good workman, but irresponsible. It seemed possible that the boy's attitude toward his father had been transferred to all authority. Although apparently desirous of a solution and showing at times a frank and pleasant manner, the boy also occasionally manifested resentment against the counselors whose advice he had sought and repeatedly told lies both to them and to his family.

Case 12. Age twenty-four. Education, public-school graduate and special courses of mechanical nature. Intelligence score 108, rating B. Occupation, machinist; had reached top of occupation. Discouraged with mechanical field and inability to get satisfactory work. Unpleasant situation at home had led him to leave and room elsewhere. Subject appeared to need "socializing". It was suggested that he set himself to solving the unsatisfactory situation at home and return there to live, and that he take up theoretical study in the mechanical field, inasmuch as concrete mechanical work had not given him opportunity to use his intellectual ability to the full. Subject was placed and became antagonistic toward the bureau because of the regulation charge to which he had previously agreed. Through further counsel this attitude of resentment was removed.

Many problems of vocational maladjustment from emotional causes may be said to spring originally from an inability or refusal to face the reality to which the individual must adjust. Such refusal may be considered to have operated in many of the preceding cases as well as those that follow.

Case 13. Age not given. College graduate, Phi Beta Kappa, stood high in languages. Intelligence score 189, rating A. Five years as quotation clerk, highest salary twenty-five dollars a week. Vocational interest lay in the ministry, for which he had always wished to train. On the other hand, he had decided ability for abstract mechanical work and expressed a dislike for work with people and considered himself unable to handle them. It very soon developed that while performing his tasks as clerk, an occupation that did not permit him to use to advantage either his high intelligence or his college training, he had spent much time daydreaming of an escape through the ministry. He came to the counselor stating that he did not believe he would be successful in the ministry; he was in the condition of wishing, yet fearing encouragement.

Counselor attempted to put before him other indirect opportunities for religious service. Suggested that he might like to develop himself as a statistician. This was considered and seized on, and the subject made arrangements to take work at Columbia University. Over a period

of several months the counsel work continued and the fact was brought out that the subject had been learning stenography on the side. He was advised to make himself more proficient in this, as a possible means of breaking away from his low salary and uninteresting work.

Through the placement bureau a call for a stenographer to go to China with a foreign-mission board was offered the subject. After reflection he concluded to take this position for the educational experience, the break with his old life, the additional money, which would permit him to marry, the opportunity to be connected with a service organization. He sailed for China, planning to study statistics on a part-time basis, and to return after two years to take up statistical work as his vocation. Through the process of counsel he had come to see that he must adjust himself by means of his own qualities, rather than by any dream qualities, to the actual occupational world.

Case 14. Age thirty-one. Nationality, Scotch. Intelligence score 191, rating A. Education, one year high school in Scotland. Occupation, traffic work for eight years.

Subject showed remarkable persistence in "knocking his head against a stone wall". Was entirely convinced of the superiority of Scotch education over American and insisted that his year of high school made him the equal of any high-school graduate here in training. Vocational interest in higher accountancy, which he planned to study. Refused to believe that the regents' requirements must be fulfilled before the C.P.A. examinations could be taken. Was referred to an accountancy expert, head of a large accountancy department. Continued to insist on the importance of his education in Scotland. Through a gradual process was brought to the view that it did not matter how excellent his year's work had been so far as the practical problem was concerned, and that if he wished to advance in accountancy, he should study and take the examinations that would give him the 72 regents' counts necessary as a preliminary to the accountancy examination.

Subject went away planning to make this adjustment. Remained away a year. On return to counselor insisted again on maintaining his own superiority based on the year's high-school work, and the entire problem of the regents' requirements and the C.P.A. was gone over with his former vehemency and persistence. Two counselors worked with him, the vocational counselor and an occupational one. He declared himself again convinced of the necessity of study and went away planning this.

For a time during the past winter cases became so frequent of men who declared themselves to have been recently discharged from prison that it began to seem necessary to require them to prove that they had been imprisoned. One man applying for counsel was investigated, by the cell number and prison that he had named, and no records of his prison history could be found, the prison authorities disclaiming all knowledge of any one answering his description. Certain obvious advantages in this claim of a prison term occurred

to the minds of the counselors, such as securing ready sympathy. This would operate particularly in the cases of the lower-grade men who appealed for a job or the price of a meal. With the higher-grade ones, the advantages of starting life over again, free from the necessity of giving references or of being connected in any way with their former life, may have been influential in the election of a prison career. The craving of the neurotic for new scenes, new connections, and a fresh start in life may have combined with a masochistic enjoyment in filling the imaginary rôle of the persecuted—it is scarcely necessary to say that in all cases they had been innocently imprisoned—to produce the released convict. The number of men with the same story could be used as an example of what Gabriel Tarde designated as fashion-imitation.

General demoralization resulting from army service has become more or less recognized as a factor in vocational maladjustment. Inability to direct their own energies, inability to settle down to any concentrated work, and a feeling of irresponsibility were characteristics found in men applying for counsel after leaving the army or navy. In the first case that follows, it will be noted that the subject spent several years in the army before he was nineteen. While the neurotic tendency probably existed or would have existed without this, there appears at least some correlation between his restlessness and roving desires and his experience in the army during the habit-forming adolescent years.

Case 15. Age twenty-three. Almost illiterate, very poor writer and speller. Intelligence score 44, rating C—. Member of Kitchener's "Own," 14th Infantry; discharged 1918, after several years' service with the Canadian army. Family high socially. Occupation, none.

Subject had no interest in his own advancement, desiring everything to remain as it was. Perfectly satisfied with present condition, education, and attainments, so long as he can secure from parents all the money and liberty he desires. Accustomed to take family car without permission and stay out on parties in it. Showed no feeling of responsibility toward his mother; made no attempts to keep appointments or to let the parents know where he was. Slovenly dresser, but interested in ordering many suits from the tailor. If not given his way, would contrive to get it by hook or crook. Decidedly introverted.

Attempt was made repeatedly to discover some occupational interest, but none was found. After several interviews in which the whole proposition of social relationships, contacts, business habits, advancement

possibilities, training essentials, and the like, was gone over, subject refused to communicate further with the counselor. In one interview with the psychological examiner, a woman, the subject showed himself very much interested in talking about himself and, so long as there appeared to be a possibility that he might get something without any effort on his part, continued to come for counsel, refusing to come when he perceived that study and work were being suggested to him. The mother wrote apologizing for her son's courtesy.

Case 16. Age thirty-three. Education, public schools. Intelligence score 79, rating C. In the marines for past six years, sergeant. Subject had strong service idea. He preferred outside work and work with people. Concluded that he did not want to spend all his life with the marines. Qualifications seemed to be in the field of concrete mechanics.

Counsel period lasted over a year. Subject was continually "just going" to get started at something. He was always cheerful and courteous and interested in studying his vocational problem. A constant attendant upon vocational informational lectures and frequently in library. While waiting to get started, he did any sort of work—gang labor, bus boy in restaurant, and other odd jobs. Was much given to making resolutions, but showed absolute incapacity for keeping them. Finally concluded that construction field would enable him to have satisfactory outdoor work, work with people, and permit him to use his mechanical ability. Still this was not entirely satisfactory, as he wished to be of greater service. At last interview was considering course of training and taking up odd jobs for a living. Wanted very much to do things, but simply could not start himself.

Cases in which the emotional level has been so lowered by the loss of the love object as seriously to affect the vocation, the health, and the life of the individual are not surprising. The problem becomes then one of substitution of stimuli, or finding something new and different that will seem unconnected with the past life and its painful memories.

Case 17. Age twenty-eight. Education, three years of high school. Intelligence score 175, rating A. Neat in appearance, address pleasing; apparently not strong physically.

In counsel it developed that since death of wife he had lost all interest in life, had allowed his physical condition to go down, and had become greatly discouraged through loss of wife's encouraging companionship. He had been in export work for eleven years, making approximately two hundred and seventy-five dollars a month; now out of position and willing to take messenger work. Care of his two small children additional factor of discouragement.

Through discussion of various fields, subject concluded that advertising was the one toward which to develop. Counselor recommended immediate physical examination, exercise in gymnasium, recreation outdoors during summer to improve physical tone. Importance of social life was stressed and specialized study in advertising recommended after his social attitude and physical strength had improved.

Placed in position through the placement bureau. Recommended that he live in "Y" dormitory to be with ambitious men; children to live with sister.

Interviewed six months after counsel process. Had carried out social and physical program, but had not yet tackled education. Physical condition improved; somewhat more optimistic view of life.

In many vocational problems it becomes a question, not so much of finding out what is wrong with the job as of heeding the old adage, *Cherchez la femme*. In Case 1 it was the love interest that put the final pressure upon the man to drive him into what closely resembled a manic-depressive psychosis. In Case 6 it was worry over the situation with his wife that brought the veteran marine engineer to seek a job on land. In Cases 5 and 10 it was the demands of the mother that stood most firmly in the way of the son's chance of improvement in another environment. Married men are of course under pressure that prevents their taking the position they would like if another that they do not like pays them a little more; the impossibility of keeping up with the growing number of mouths to feed has sent men to the counselor in states of utter depression, over both their jobs and their families. "I've got to have more money", is usually the refrain of this group; one man very vehemently declared this, only to add, "My wife wants a fur coat. I've got to make more money." Then a few each year come to the office with a story of having stolen money, forged checks, or the like because of a woman. Two closely parallel cases came in recently in which the men declared themselves under the pressure of such competition to keep the interest of the girls with whom they were in love—and who, they said, expected money to be spent on them—that they could do nothing else but steal; in both cases it was evident that there was a strong pride reaction and a determination to keep up appearances before the girls, whose fathers were men of some financial prominence.

Case 18. Age twenty-four. Born in New England. Education, high-school graduate. Four years in army. Intelligence rating not secured; evidently very high. Occupation, salesman. On applying for counsel, stated that he was disgusted with opportunity for advancement with present firm on present basis, and that he must have money to marry a girl whose family was of high social position. Subject pleasing in appearance, neat, energetic, enthusiastic and fluent talker, apparently should have been successful as salesman.

In conference he repeatedly declared that he would do anything for money and showed himself very ambitious. He was investigating any proposition in the papers that showed prospect of immediate income. During process of counsel, subject was caught in petty thievery, entering rooms of hotel with master key and stealing from his friends. Counselor was called into discussion with the management and subject was not prosecuted, but was required to give written agreement to pay back in installments the money stolen.

Another position was secured that offered advancement. Subject through his enthusiasm and hard work began to rise, enjoying his work and making much better salary in his new field (advertising). Money stolen was paid back. Attitude of subject changed as soon as he was convinced of the possibility of making good and advancing.

Moral complexes sometimes appear among the men applying for counsel, a feeling of having sinned or of having done wrong in their vocation, perhaps a feeling that the entire business is unethical and that they cannot escape the taint except by leaving it. In cases in which customary business ethics have not been violated, it would seem that this feeling of guilt is a fiction elaborated by the subject to explain to himself his general depression and lack of success, a sort of survival in faint and imperfect form of the cult of the avenging furies. If the man has sinned and is receiving punishment, he cannot feel that any weakness in himself is responsible for his failure or maladjustment, rather is he strong, a *man*, taking his punishment and acknowledging his wrong like a man. In the case that follows one such fiction did not prove sufficient compensation for the man's inferiority, so two were elaborated, one to cover his vocation and one his home situation.

Case 19. Age thirty-five. Family strict Pennsylvania Dutch. Middle-class economical upbringing. Intelligence score not obtained, apparently high.

Had married into family of considerable money. States that he married for money, although he now loves his wife. Married while making salary between three and four thousand a year (war-time basis). Now living with mother-in-law. Wife teaching school. Baby one year old.

Business associations always in sales field. Stayed with firm selling auto trucks that were not as good as others on the market for the same money. When offered position with reliable firm, declined it because he could make more money with the former firm. Regrets this now and considers that he was associated with shady practices. Now says he is "out of luck", making commissions on sales of about one hundred and twenty-five a month. Feels the "shady" practices of firm to be cause of his hard luck.

Family tell him that he is mentally ill and try to send him to specialist; they are patient, but are becoming disgusted with his inability to produce an income sufficient for their needs. He feels caught in a position where he can never make enough to satisfy them, nor can he afford to take a lower job in some other field to work up in specialized lines in which he could eventually make more. Feels himself a failure in the sales field, but compelled to remain there. Wife unable to understand his position and more strongly attached to family than to him.

Subject feels that because of wrong conduct in marrying for money and because of "shady" practices necessary to keep up his income in auto-sales work, he is now being punished for sinning against moral code.

Counselor's first task was to untangle the moral complication, finding that no business practices had been followed that were not accepted and customary in the field of auto-sales work and further finding that subject had a genuine feeling toward his wife.

Subject encouraged to attempt to secure closer understanding with his wife; to get down to a sound economic basis by supporting family on his own income, either through leaving city or establishing home of his own away from wife's family. Plans made for him to start educational training in field of interest. Problem of showing him that he was very much like other human beings, that he had not been singled out for unremitting punishment for strange and unusual sins. Subject encouraged to believe that he was not "losing his mind" and that he was capable of "standing on his own feet".

The cases presented here, although by no means inclusive of all possibilities, are suggestive of general groupings under the stimulus of which emotional disturbances may be expected in some individuals to reach the point of creating, or seeming to create, a maladjustment vocationally. It has been said that the form of occupation might have remained satisfactory to the man had not his emotional depression, frequently arising from other causes, been carried over into the vocation, so that there resulted a transference or conditioning of the attitude toward the vocation. When the emotional level has been depressed from any cause, there remains but a short step toward loss of interest in the job, discouragement as to advancement, *wanderlust*, inability to face the facts of needed training and education, inability to dissociate self from the job, and the like. Speaking generally, pressure of one sort or another, resulting in conflict, seems to have produced most of the affective problems illustrated above—pressure upon the individual to do or to become something more than he feels he can do or become. Multiplicity of stimuli may become such that the individual rebels or else fails to respond sufficiently to continue his position in his business or his social life.

So far as our general experience goes, there seems to be no correlation between affective disturbances of the sort discussed here and ability to do mental work. Inefficiency induced by such depression seems capable of explanation entirely on the emotional basis of loss of interest, self-distrust, lowered drive, enthusiasm, and vitality; a more refined technique may succeed in isolating the effect of the affective factors upon the capacity for mental work. Clinical studies¹ have recently shown that emotional blocking may lower the intelligence quotient of a patient ten to twenty points, and it seems possible that this might also be true of affective disturbances not amounting to psychoses. However, so far as the vocational psychologist is concerned, as vocational adjustment is dependent upon both emotional and intellectual qualities, the direct and immediate effect of an affective disturbance is so decisive as to obscure any indirect influence upon the intellect and so upon the vocation. In the non-psychiatric cases, the problem of the vocationalist is that of discovering the original cause of the affective disturbance and of assisting the individual in overthrowing and discarding the conditioned emotional reaction. This may be effected through retraining the individual or through changing the environment—by supplying, for instance, one or more outside interests, possibly social in nature, or an avocation. In cases where neither of these general courses is possible, the increasing vocational maladjustment tends to pass out of the field of vocational psychology into that of psychopathology.

¹ *Influence of Affective Disturbances on Responses to the Stanford-Binet Test*, by Stephen Perham Jewett and Phyllis Blanchard. MENTAL HYGIENE, Vol. 6, pp. 39-56, January, 1922.

ORGANIZATION AND SCOPE OF A STATE BUREAU OF MENTAL HEALTH*

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THE Pennsylvania Department of Public Welfare has brought into close relationship activities hitherto more or less widely separated. From a neuropsychiatric standpoint, the close affiliation of the Bureau of Mental Health with the other three bureaus is most fortunate. Mental disorder and mental defect are accepted etiological factors in dependency, a field covered by the Bureau of Assistance, with its supervision of homes, hospitals, and almshouses; they are factors likewise in delinquency, the field of the Bureau of Restoration, with its oversight of the penal institutions; and the Bureau of Children presents an opportunity for the fostering of the early study of mentality, personality, and other neuropsychiatric questions of paramount importance in childhood, particularly from a prophylactic standpoint. The associations thus established present opportunities for an increasing extension of mental-health principles and practices among groups in which such considerations are often neglected or unknown.

The present discussion, however, will be limited to an account of the essential organization and scope of the Bureau of Mental Health and something of the past year's accomplishments, referring only incidentally to those activities that are connected with the affiliated bureaus.

In general, the functions of the Bureau of Mental Health may be characterized briefly as coördination and standardization. In the way of coördination, the bureau acts with other agencies, state and private, and individuals in promoting neuropsychiatric welfare. With a competent central adjusting station, considerable waste motion, duplication of effort, ill-timed activity, and other hindrances to steady progress

* Read before the Philadelphia Psychiatric Society, November 10, 1922.

may be avoided. In its standardization work, the bureau contends that there are certain minimum requirements without which a hospital cannot fulfill its duty of providing for the comfort and promoting the chances for restoration of mental patients. A sufficient number of units for the proper classification of patients, diagnostic and other laboratory facilities, general medical and surgical equipment, facilities for such special treatment as hydrotherapy, electrotherapy, and dental and occupational therapy, training activities for nurses and attendants in charge of a medical superintendent, and a staff experienced in neuropsychiatry and practicing accepted methods of examination and treatment, are obviously among the essential features of a modern mental hospital.

The accompanying organization chart (page 121) outlines some of the details of the work of the Bureau of Mental Health. At present the personnel is limited to five individuals—the director, the secretary, two field representatives, and a statistical and general office clerk. During the past year, the director has been in the field for a considerable part of the time.

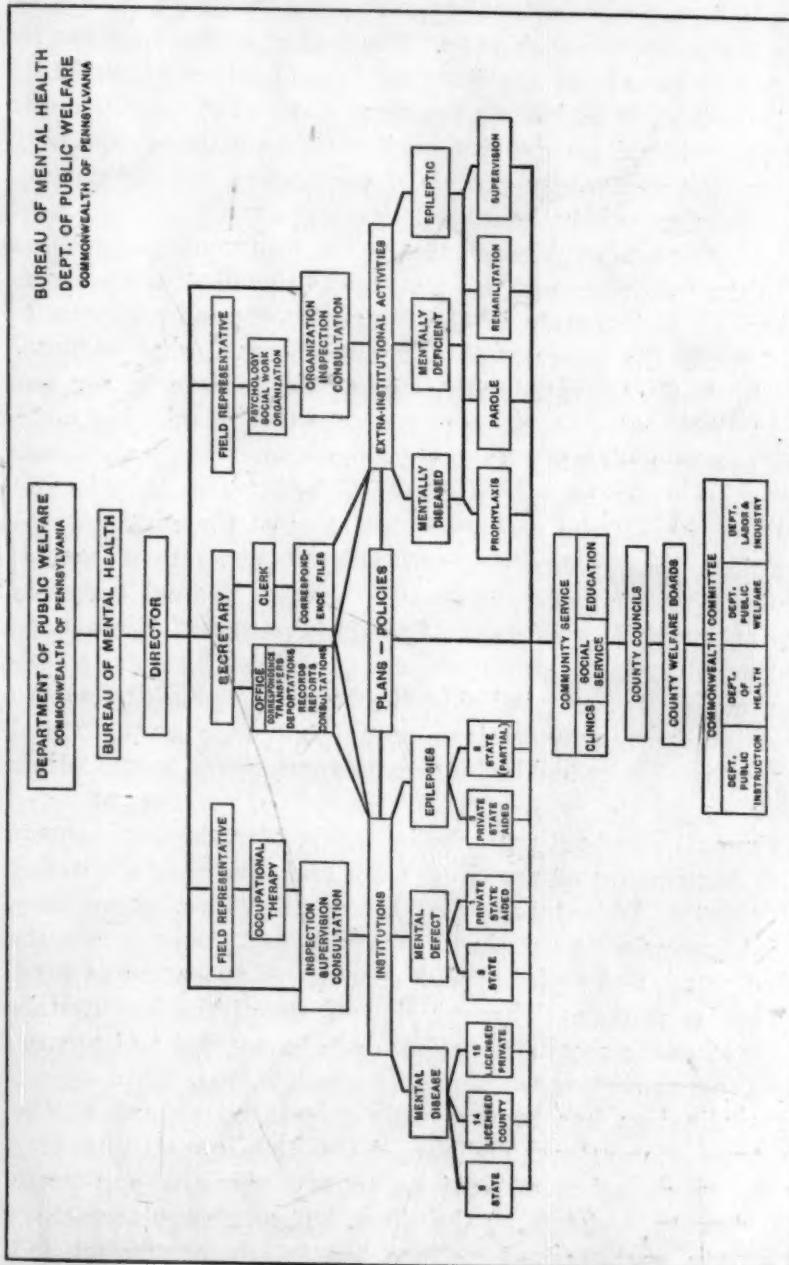
The activities of the bureau are divided between office work and work in the field, each of which is in turn divided into institutional and community work. In the office, much of the time is taken up by an increasing amount of general correspondence and statistical work. Transfers of patients from one hospital to another in this state, deportation of patients belonging to other states or countries, investigation of the alleged Pennsylvania residence of patients in the hospitals of other states, are matters largely attended to by the secretary. She is also engaged in the compiling and filing of the statistical cards and reports from the various state, county, and private institutions.

The field activities of the director are mainly concerned with visits to the state, county, and private licensed institutions, during which equipment and methods are observed, complaints of patients investigated, special cases examined, and various plans and policies discussed with the officers in charge.

An experienced occupational therapist is the field representative of the bureau in that important activity. She is

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available for consultation by institutions that wish to develop further occupational therapy. The field representative is prepared to remain at any hospital for a number of weeks, if it is desired, to assist in a practical way in the establishment of occupational classes and habit-training groups, especially among the apparently chronic, deteriorating, usually unoccupied, and so-called "backward" patients.

The Bureau of Mental Health is profoundly impressed with the importance of those activities that tend toward prevention. It is surely in the interests of public welfare to deal with the sources of the ever-increasing streams of mental patients, rather than simply to provide larger and larger reservoirs for their reception. Childhood, it is needless to say, presents a splendid opportunity for prophylactic measures. Moreover, it is axiomatic that the earlier a mental patient is seen, the better are his chances for restoration—sufficient reason for the existence of out-patient mental clinics. Without such community service, mental hospitals are only partially efficient. For the purpose of stimulating and assisting in the organization of extra-institutional activities, especially mental clinics, the bureau is provided with a second field representative, a qualified social worker and psychologist, who has had a broad experience in mental-clinic work.

The success of out-patient clinics, however, depends largely upon the amount of pre-clinic work and the thoroughness of after-care. In establishing clinics, therefore, community social agencies must be interested and their activities coöordinated, and each hospital encouraged to secure at least one social worker. Through the efforts of the latter, it is expected that many more patients will be paroled and eventually a large percentage completely rehabilitated.

Coöordination has been already mentioned as one of the functions of the Bureau of Mental Health. In a still broader sense, coöordination of various county agencies and state departments is shown on the chart. Through the formation of county councils and welfare boards of socially minded citizens and active workers—which in turn are under the guidance of or in consultation with the Commonwealth Committee, consisting of representatives of the four state depart-

ments of Public Instruction, Health, Public Welfare, and Labor and Industry—much duplication of effort will be avoided and real progress result.

In all fields, especially in connection with the community service, every opportunity is taken to inform the public upon questions of mental health, through consultations, conferences, talks, distribution of pamphlets, and so on. Popular opposition to rational welfare movements is almost, if not always, the result of lack of appreciation of existing conditions and of the reasons for desiring a change; hence the need for education.

An outline of some of the accomplishments of the past year presents most concretely the general scope of the Bureau of Mental Health.

Considerable progress has been made in the way of standardization of forms and records. The nationally uniform method of compiling and filing statistics, recommended for mental hospitals by the American Psychiatric Association and The National Committee for Mental Hygiene, has been officially adopted for use in Pennsylvania. This includes blank annual report forms furnished in triplicate by The National Committee for Mental Hygiene, one copy for the National Committee, one for the hospital, and one for the bureau. In connection with these forms, statistical cards furnished by the bureau are used, consisting of five for each sex—*i.e.*, recording first admission, readmission, discharge, transfer, and death; copies of these are sent to the central office. Similar forms and cards recommended as a nationally uniform system by the Association for the Study of the Feebleminded and The National Committee for Mental Hygiene have also been adopted by the bureau. A monthly report for mental hospitals, conforming in general to the statistical forms, has been devised for filing with the bureau.

A complete survey of both state and county mental hospitals has been made by the director. There were several objects in view in making this survey, among which may be mentioned the gathering of data for the general information of the bureau and department, both as a basis for a comparison with the findings of the surveys of 1914 and 1917, and for the purpose of ascertaining the most urgent needs and the

conditions that called for immediate action. While it was found that there have been a number of marked changes for the better, especially in some of the larger county institutions, in conformation with some of the recommendations of previous surveys, yet the general situation was essentially as previously reported. To summarize: (a) Pennsylvania shows an extreme lack of standardization of facilities for the care of mental patients, having at once some of the very best hospitals and other institutions that are merely adjuncts of almshouses; (b) none of the county institutions are as well equipped as the state hospitals in respect to medical staff, diagnostic laboratory equipment, and methods and facilities for treatment; (c) some of the smaller county hospitals were found to have no facilities for the special examination and treatment of mental patients, being inferior even in custodial methods.

No one experienced in modern methods of treatment of neuropsychiatric patients would consider as proper the complete disregard of the necessity for special medical examination and supervision of such patients; the tying to benches by straps or otherwise restraining day after day of apparently organic cases because they were troublesome, with no attempt at treatment; and the seclusion in double-doored basement rooms of cases of agitated depression, for similar reasons; yet the surveys disclosed such conditions. In many of these small county institutions, it was customary for the physician, usually inexperienced in psychiatry, to call once or twice a week and then to see only those patients to whom his attention was directed by the almshouse steward. The only patients admitted to such county institutions who were likely to receive adequate examination and treatment were those who were later transferred to state hospitals because their noisy, violent, or destructive habits made them too troublesome to keep in the county institution.

Fortunately, several hundred beds being available in the state hospitals, it became possible to relieve of their mental patients those counties in which conditions seemed especially to call for it. This was done after numerous conferences with county commissioners, directors of the poor, and physicians and stewards of almshouses—conferences that practically

always resulted in the unanimous coöperation of these officials. Up to date, the licenses of seven county institutions have been withdrawn, the patients being transferred to state hospitals. In addition, one county asylum operating without a license has been discontinued.

Fifteen mental clinics, adjuncts to the mental hospitals, have been established in various counties. Clinics are contemplated elsewhere as a demand for such facilities becomes manifest and as personnel and quarters become available. These clinics act in close coöperation with the Department of Public Instruction in helping the schools identify mental defectives.

As a temporary measure, until the state is prepared to assume the whole burden, and as the most direct method of increasing the accommodations for mental defectives, constructive legislation is being prepared which contemplates the use of the vacated county asylums for the care of certain custodial types of the feeble-minded. This will leave more room in state institutions for trainable mental defectives.

Using as a basis the suggestions received from neuropsychiatrists throughout the state in reply to a questionnaire, the bureau is studying apparent defects in the laws and procedure in regard to mental patients and formulating remedial legislation.

Legislation is being prepared for the establishment of a special institution for epileptics, the present provisions for such patients in Pennsylvania being inadequate.

In the comprehensive plan for the future are included:

1. Complete state care of mental patients as a goal to be attained gradually over a series of years.
2. Increase of institutional capacity in accordance with a state-wide plan.
3. The establishment of at least two psychopathic hospitals for early diagnosis by intensive methods, to be utilized also as research and teaching centers for hospital physicians and other neuropsychiatrists.
4. Establishment of facilities for the proper care and custody of defective delinquents—e.g., in separate institutions or in divisions of already existing institutions.

5. Serious consideration of colonization of mental defectives, a method successfully carried on in other states.
6. Continued endeavor to raise the standard of care and treatment of mental patients.
7. Stimulation of vigorous efforts to rehabilitate more patients by parole and later discharge, aided by means of more clinics and more social workers in the hospitals.

With the final adoption of complete state care of mental patients, the problem of standardization will have been largely solved. With an extensive development of extramural activities, such as those of clinics and social-service facilities, much will have been accomplished in the way of prevention of mental disorder and the various complications that result from it.

NURSES' TRAINING SCHOOLS IN STATE HOSPITALS, TOGETHER WITH SOME REMARKS CONCERNING CURRICULA

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THERE are not enough trained workers upon the wards of the Illinois state hospitals, nor is there any immediate prospect of relief from this condition. There are at present training schools in six of the hospitals, with a total of forty-six pupils, an average of less than eight to a school. The graduates this year will number only fifteen! The course covers a two-year period, and there is an educational requirement of one year of high school; graduates may take a year's postgraduate course of instruction in a general hospital, and after its successful completion be admitted to the examination for registered nurses.

In view of these facts, the question naturally arises: Why is Illinois not more successful in this undertaking? What are the factors that contribute to failure, and are they remediable? Eight years ago each hospital had its training school, and graduating classes of from eight to twelve were common. In what respects have conditions so changed as to bring about so great a reduction in the yearly output?

Briefly enumerated, they are probably somewhat as follows:

1. The diversion of women into the industries during the war and post-war periods and the overthrow of old standards of life, resulting in increased demands on the part of the younger generation for larger and more immediate returns in the way of personal satisfaction.

2. The eight-hour day with a consequent loss of some of the old-time personal interest and sense of responsibility and

an increase of leisure time, along with increased opportunity for diversion at a moderate cost during this leisure period.

3. Increased preliminary educational requirements: one year of high school in place of common school.

4. Increased wages: sixty dollars—the present graduate beginning rate—is not so attractive to the new attendant who receives forty-five dollars per month as was fifty dollars in the past, when the new attendant received but thirty-five dollars; and still longer ago, when the graduate received forty dollars and the beginner twenty-five, the proportional difference was even greater. In other words, the new attendant can now look forward to only a 33 per cent increase, while formerly she could expect a 60 per cent increase.

5. The lower standard of expenditure resulting from the war-time increase in taxes and cost of living, which has necessitated, as perhaps in other states, some limitation of the supply of ward furnishings, patients' clothing, and the like, thus possibly tending to discourage new and ambitious employees in maintaining a constructive attitude toward their hospital work.

6. The introduction of occupational therapy upon a large scale, with the use of attendant helpers who are often rewarded for their interest in this work by appointments as "charge attendants" at fifty-five dollars a month, a procedure that drains away material otherwise available for the training schools.

Possibly in the above enumeration we have the entire explanation of our apparent failure in Illinois, but our conclusions would not satisfy were we to rest content without further search. It is necessary to know what others in the same field have done—how they have attacked the problem and with what results. Accordingly a form was sent out to 123 state hospitals in the United States and to 6 provincial hospitals in Canada, from which we received 85 replies, a fair return, perhaps, as questionnaires go. Doubtless some of those who did not reply were weary of being questioned about this and that, and the remainder possibly had not a great deal to contribute. However this may be, of the 85 who replied, only 47 stated that they had a training school for

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nurses.¹ This latter group includes hospitals in the East (east of Indiana), the Middle West, and the South, and six provincial hospitals in Canada. *No hospitals west of Iowa report training schools!*

As the entire tabulated form is too large for reproduction here, results must be analyzed in a series of smaller tables, showing the various correlations that have appealed to us as most instructive.

Twenty-nine of our schools give a three-year course (we will call this Group A); 16 give a two-year course (Group B); and 2 cannot be included because of indefinite information, leaving us a total of 45 for our correlations. Now what are the average numbers of pupils in Groups A and B?²

TABLE 1

Group A

Total number of pupils (28 schools).....	642
Average number of pupils per school.....	23
<i>Group B</i>	
Total number of pupils (14 schools).....	442
Average number of pupils.....	31

There are very evidently many more pupils per school in Group B than in Group A. But let us see what is the decrease between the first and the last years:

TABLE 2

Group A

First year	330 pupils
Last year	115 pupils
Decrease	65 per cent
<i>Group B</i>	
First year	267 pupils

Last year	175 pupils
Decrease	34 per cent

The amount of decrease as well as the size of the school would seem to favor Group B very decidedly. We must, however, make some reservations: in the first place we are viewing only a cross section of the activities of all these schools; and in the second, the three-year schools probably show up

¹ Exclusive of Illinois institutions, which are not included in the above figures and have not been considered in tabulating our results.

² Three schools, one in Group A and two in Group B, did not answer this question as to number of pupils.

more poorly in their final year just now because pupils were fewer three years ago than two years ago. However this may be, Illinois is in the Middle West, and it would be well for us to know in this connection what type of school predominates in this section. The following table shows the sectional distribution of the two groups:

Section		Group A	Group B
East	18	5	
Middle West	5	7	
South	3	1	
Canada	3	3	
	—	—	—
	29	16	

Clearly the Eastern schools prefer the three-year course—18 out of 23; while the Middle-Western are almost equally divided between the two—5 to 7 in favor of the two-year course. This would seem to exhaust the possibilities of analysis from the standpoint of length of course as it may affect the size of the schools. Let us, then, proceed to another matter of importance—the influence of educational requirements:

Requirements	Number of schools	Average number of first-year pupils	Average number in entire school
Common school	20	15	26
One year or more of high school	25	11	19

It should be noted that only five schools require more than one-year-high-school preliminary education, of which three ask for two years and two for four years. The schools that have only a common-school requirement have 36 per cent more pupils in the first year and 37 per cent more pupils in the entire school—practically the same percentage differences as that between the number of pupils in Group A and in Group B, which striking similarity is, of course, due to the fact that all but four of Group A schools require a preliminary year of high-school work, while Group B schools without exception require only a common-school education.

Therefore, it would seem that if Illinois wishes to have

larger training schools, *the question of quality being disregarded for the present*, it should give a two-year course and require only a common-school preliminary education. It will be remembered that Illinois at the present time is giving a two-year course, but requires a preliminary education of one-year high school.

But let us inquire into the three-year schools in the Middle-Western group. Are they more or are they less successful than those in the East? There are but five of them, and one of these has failed to give data concerning the number of pupils; the remaining four have an average of 22 pupils in training and 11 in the first year, figures in line with the general average for the entire Group A.

The two-year schools—Group B—in the Middle West have an average of 26 pupils, and 19 of them are in the first year. In the Eastern group, four schools in Group B average 14 first-year students and 38 in the entire school, figures well in advance of the Group A schools in this section, which average but 12 pupils in the first year and 24 in the school.

Table 5 groups the hospitals with reference to the initial salaries paid to pupils and the size of the schools:

TABLE 5

<i>Number of hospitals</i>	<i>Initial-salary range</i>	<i>Average number of pupils</i>
4	\$5.00-\$15.00	16
14	15.00- 25.00	15
5	30.00- 35.00	12
9	40.00	13
14	40.00- 45.00	8

This table would seem to indicate clearly that salary is of itself not an important factor in obtaining pupils. One of the largest schools reported apparently makes no cash allowance to pupils. The same observation seems to be true of the number of pupils as related to the salaries paid to graduates; in fact, the graduates' salaries in the various hospitals are surprisingly uniform—sixty to seventy dollars. There are some notable exceptions, as, for instance, where they are said to go up to one hundred dollars per month; here, however, there would seem to be some question as to whether the latter salary does not imply additional responsibilities.

Let us leave with this the question of mere monetary rewards and ask what part an appeal to ambition may play in obtaining pupils and retaining them to the bitter end. What appeal is made by the accredited school whose courses lead up to the possibility of becoming a registered nurse? Unfortunately this inquiry apparently dies a speedy death when one takes into consideration the fact that Group A practically represents the accredited schools (24 out of the 29 in that group being accredited), while Group B is entirely unaccredited. The former group shows 23 pupils to the school and a decrease of 65 per cent between the first and the last year, while the latter has 31 pupils per school and a decrease of only 34 per cent in the last year. Apparently the title of registered nurse is upon the whole a no more attractive goal than the more humble title of graduate nurse. Thus the advice of ancient Omar—to "take the cash and let the credit go"—appears to be of the proper metrical length to register clearly in the ears of the majority of the modern young women employees of state hospitals. Quick action and speedy returns appeal to the greater number and hold more of them to the end.

Creature comforts seem to have their effect as well, for those schools (31) having employees' "homes" average 25 pupils each, while those without such arrangements (22) average but 16 pupils.

The number of hours upon daily duty seems to have no especial influence upon the average number of pupils up to ten hours, but beyond this point there is a sudden drop, although it should be noted that *350 out of 1,000 pupils work for twelve-hour periods or more!*

It would seem unnecessary to inquire further were one endeavoring only to ascertain from the experience of others what factors contribute most surely to large training schools. However, our inquiry must not be confined merely to the question of an increased number of pupils. No matter how large the school, its final service to the hospital can be measured only by the number *and quality* of the graduates who remain in the state service. Therefore, it would be interesting to know in what group this result is most marked. If a greater proportionate number of graduates of the three-

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year course remain in the service, this fact must be taken into account in weighing the pros and cons before one can come to any decision concerning length of course or kind of school. Obviously this was a difficult matter to cover in a questionnaire. All we could do was to inquire: Does the present arrangement provide adequate help? Table 6 summarizes the answers:

TABLE 6

	<i>Yes</i>	<i>No</i>	<i>Fair</i>
East:			
Group A	6	12	..
Group B	1	3	1
Midwest:			
Group A	1	3	1
Group B	3	3	1

Now the question remains for Illinois to decide whether or not it shall conduct Group B training schools for the sake of obtaining tangible results more quickly. One of us (C. F. R.) believes along with many other medical men that excellent institutional help can be trained in two years' time and that a preliminary high-school course of one to four years duration is not altogether necessary, provided extreme care is used in the selection of common-school material. However, it would seem that at the present time such a move would at least appear to be a step backward. We want the best of trained nursing care for our patients, and just now the consensus of opinion favors the longer course, while very naturally the high-school student is a preferred pupil because she is better prepared and upon the whole perhaps more ambitious than her common-school sister. *Of seventy employees with a common-school education recently interviewed by one of our chief nurses, not one evidenced a desire for special training!*

And there you are! Perhaps the difficulty lies in the spirit of the times; the girls who will work in a hospital for mental disorders are not interested in future benefits to be obtained by the sacrifice of more immediate pleasures. The question then remains: Can we in time make an appeal to the more far-sighted that will be strong enough to build up our schools to a point where they will even come near to supplying our

needs? As to this, only time will tell; naturally we cannot continue the experiment indefinitely.

Supposing, then, that we are to go on with what is practically a three-year training school, let us see what light our questionnaire and our experience cast upon the matter of the curriculum.

Twenty-one hospitals out of 47 that had training schools for nurses sent us their curricula. Seven of these showed only a limited course of study, and three presented nothing more than three or four series of lectures, each series treating of a number of different subjects. These three are not included in the following discussion.

A careful study of the curricula submitted reveals some interesting data. Notwithstanding the fact that all were prepared by people interested in the same type of work and with the same purpose in mind, there is the greatest variance as to the subjects considered necessary, the number of hours devoted to each, and the point in the course at which each is presented. One fact, however, stands out in nearly all cases and that is the failure to pay any particular attention to subjects pertaining to psychiatry and the treatment of psychiatric patients. It is not uncommon to find that more attention is given to surgery and surgical diseases than to mental disorders, in spite of the fact that the average state hospital does little surgery.

Diversional and occupational therapy, now so extensively used in many state hospitals, are barely considered, while many hours are devoted to *materia medica*. Psychology is passed over lightly, only a small percentage of the schools deeming it necessary to include it in the curriculum at all. *Psychiatry, which should be the major subject of all, is given less attention than materia medica and ethics, and no mention is made of psychiatric clinics, a most important method of instruction.* Psychiatric nursing principles are also neglected, but in this case one is inclined to believe that the subject is taken up under a different title, possibly in the courses upon ethics or nursing principles or practical nursing.

The majority of schools are devoting the greater part of the first year to general nursing topics, very little attention being given to the psychiatric side of the instruction. One

announcement states that the curriculum includes lectures and recitations on anatomy and physiology, hygiene, emergencies, *materia medica*, medicine, surgery, and obstetrics, while no mention is made of courses in the important subjects of psychiatry and psychology, although they are given a few hours in the last year. *The subject of mental hygiene is omitted from every curriculum.* Entirely too much emphasis has been placed upon the general aspects of nursing at the expense of the more special type so necessary to hospitals for mental disorders.

IMPORTANT POINTS TO BE KEPT IN MIND CONCERNING CURRICULA

1. A curriculum for our purpose is a course of study to be used in a hospital for mental disorders, and has as its specific end the training of young women for psychiatric work in such hospitals and in the community.
2. The course of study, if the school is to be accredited, must in every way meet the requirements of the state board of registration for nurses.
3. The various subjects should be evaluated and given time and place in the course of study according to their general importance and their relation to other subjects.
4. All the fundamental sciences of nursing must be taken up first, because it is only by an understanding and appreciation of such sciences that the student will be able to get the proper attitude and be able to pursue intelligently the more special subjects.

The subjects to be taken up in the preliminary term are anatomy and physiology, bacteriology, chemistry, drugs and solutions, emergencies, ethics, hospital housekeeping, hygiene, nursing principles, surgical technique, amusements, and occupational therapy.

Some portion of the preliminary term should be devoted entirely to intensive class work, and during these weeks no ward duty should be required. This period may be given at the beginning of the course or after the student has had a few weeks' experience on the wards.

The last half of the first year, at which time the student will go on active duty, will be devoted to the theoretical subjects: anatomy of the nervous system, clinics, dietetics, his-

tory of nursing, including the history of the care of mental patients, *materia medica*, pathology, psychiatric nursing, and psychology.

The entire second year should be spent in a general hospital, where the student may get training and experience in those subjects in which the state hospital is deficient—namely, communicable diseases, dietetics, diseases of the organs of special sense, gynecology, medical diseases, obstetrics, orthopedics, pediatrics, and surgery.

The subjects to be taken up in the third year are, in the first semester, clinics, hydrotherapy and massage, psychiatry, psychology, psychiatric nursing, and occupational therapy; in the second semester, hospital administration, clinical psychiatric methods, mental hygiene, professional problems, modern social methods, and a general survey of the nursing field.

There is much discussion just now regarding the length of *the three-year course*—whether it should be reduced to two years and four months or continue as at present. The curriculum outlined above is based upon the present length; if the reduction is adopted, the two subjects, mental hygiene and clinical psychiatric methods, must be included in the first half of the third year, and the other subjects of the last semester dropped from the curriculum.

The practical work should be planned so that the student will have experience in the various departments of the hospital. Here, also, good judgment must be used and the importance of training the student in practical work should be given due consideration. A judiciously planned schedule of ward service should be consistently followed, in which the student is not sacrificed for the service, or the patient for the sake of training the student.

THE MENTAL HEALTH OF 463 CHILDREN FROM DEMENTIA-PRAECOX STOCK

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ROSAMOND CLARK

THE present investigation was undertaken as a companion study to the work of Dr. D. A. Thom, who at the June, 1921, meeting of the American Psychiatric Society reported an investigation of convulsive inheritance in the offspring of epileptics. Dr. Thom was able to sound an optimistic note in regard to the percentage of normal children born of epileptic parents, thus bringing fresh hope to those who had long accepted the more or less fatalistic attitude that direct inheritance of epilepsy was to be expected if matings were made regardless of this disorder.

Dr. Thom gives in tabular form¹ the results of his findings as compared with those of Echeverria, whose statistics on this point of the inheritability of epilepsy are extensively quoted:

	Echeverria	Thom
Number of matings.....	136	117
Number of children.....	531	431
Normal.	105	238
Epileptic.	78	14
Insane.	11	2
Feeble-minded.	18	14
Died.	222	151

Dr. Thom's conclusions were as follows:

"1. Epilepsy as a disease is not transmitted directly from parent to offspring; rather we believe that it is a nervous system lacking in normal stability that is inherited, and the manifestations of this instability may be mental deficiency of all degrees, insanity of various types, neurological and psychopathic disorders, or convulsions from various exciting

¹ See *Epilepsy in the Offspring of Epileptics*, by D. A. Thom and Gerna S. Walker. *American Journal of Psychiatry*, April 1922, Vol. 1, p. 620.

causes that would have little or no effect on a normally developed nervous system.

"2. These mental and nervous disorders are less frequently found in the offspring of the so-called epileptic than we have heretofore believed, and the future of the offspring born of epileptic parents is not so hopeless as pessimistic authorities on heredity record.

"3. Maternal defects are more frequently manifested in some form or other in the offspring than are paternal defects, and, when present, are likely to appear at an earlier age.

"4. It was found that in only a few cases were we dealing with 'pure cultures' of epilepsy. In most instances, contamination was brought about by some defect in the other partner, such as feeble-mindedness, insanity, alcohol, and syphilis.

"5. In this study it was found that convulsive disorders were more frequently found in the offspring of the organic group as compared with the idiopathic group. The organic group is, however, so small that too much consideration should not be given to this point. It should, nevertheless, stimulate further inquiry relative to the offspring of normal individuals and a larger group of organic cases.

"6. This study indicates the necessity of research relative to the transmissibility of genetic defects in both epilepsy and psychiatry. We feel that dogmatism regarding this aspect of mental diseases has not been justified."

Since dementia praecox, in whatever degree one wishes to consider it, is one of the most permanent groups of our hospital population, I was interested to know what the mental health of the offspring of this group would be.

From the card catalogue of the Boston Psychopathic Hospital records I took 1,000 names of cases that had been unequivocally diagnosed dementia praecox. While realizing that diagnosis is a matter of opinion, I took these cases purely alphabetically without reference to time of the diagnosis or the personnel of the hospital.

The first step was to find how many of these patients were married. Seventy-five of the 1,000 were not of marriageable age, leaving 925 to be considered. Of these, only 275 were married (5 twice). If one recalls the type of individual that

goes to make up the dementia-praecox group, the reason for the few marriages becomes fairly evident. The indolent, seclusive, silent, awkward, sensitive, indecisive male has but a minor social part to play. These traits are not so conspicuous in women, since a more or less retiring disposition has been expected of them. This probably accounts for the fact that of the 275 married, the majority—194—were women.

The conceptions following these marriages were 605, and there were 463 living children¹ in evidence from the records. The plan of the work was to gather such data as would have present and future interest in the history of the development of these children. The items to be ascertained were: How many children are there, living or dead? How many miscarriages have there been? Age at death and cause of death? Age of the living at this date? School grade now? Grades repeated? Skipped? Stopped? If finished with school, age when finished? Work: variety, type, and remuneration? Health: good, bad, indifferent? Habits: social and anti-social? Conflict with law? Difficulties of child? Relatives' story of the situation and any dependable information that the relatives can give about them.

The obstacles that attended the gathering of this information will be comprehensible to any one who has attempted this type of investigation. Stated merely in terms of hours, the difficulties were enormous. The people whom we were trying to locate had been discharged from the hospital during a period of ten years—from 1912-1921—a period attended by all the changes that war brings. After repeated trials of letters, city directories, social agencies, police stations, and home visits, we began to believe that we were conducting a research indeed. When the right persons were found, fresh news—of twins, deaths, separations, deportations, movings—reduced the original figures by a distilling process and our items yielded new figures.

The children included in this study were the offspring of 136 matings:

¹ Miss Rosamond Clark has had the entire charge of the social investigation of these children, aided by suggestions from Miss Hannah Curtis, Director of Social Work for the Massachusetts Department of Mental Diseases, to whom cordial thanks are due.

Children dead, not investigated.....	82
Children dead, but investigated.....	4
Children living and investigated.....	377
Total children.....	463

The number of children per mating was 3.4, which is probably the lowest desirable ratio of propagation.

A survey of any group of children would necessarily disclose frequent instances of the minor difficulties and disturbances of childhood, such as overgrowth of tonsils, adenoids, eye and ear defects, or sources of peripheral irritation. Discounting the effects of such factors as fairly common to all children, we find that the offspring of these dementia-praecox patients show surprisingly few mental peculiarities. The following table shows the deviations from normal among the 381 children investigated:

Normal	295
Feeble-minded	4
Dementia-praecox cases.....	5
Backward	12
"Nervous"	12
Physically diseased*.....	17
Cases of conduct disorder.....	36
Total investigated.....	381

* Two dead.

Our aim has been to tell the worst about these children, though since this report concerns mental health, one might leave out the physically diseased (17) and the cases of conduct disorder (36) if one were pleased to do so. But even including these two classes among the deviators, we still have a fairly satisfactory percentage of normal children—295 out of 381, or 77.4 per cent. On the other hand, one must admit that these children have not all reached the praecox zone, and if, as Dr. Annette McIntire¹ states, the mental-disease process known as dementia praecox apparently does not develop as a recognizable psychosis in very great numbers of cases before the beginning of the adolescent period, we must not be too

¹ *Psychoses, Psychoneuroses, and Psychopathic Conditions in Children.* By Annette M. McIntire. *Boston Medical and Surgical Journal*, May 11, 1922, Vol. 186, pp. 630-641.

comfortable about the 295 apparently normal individuals, since the ages of the 381 are as follows:

Under 6 years.....	62
6-10 years.....	138
11-15 years.....	94
16-20 years.....	50
Over 20 years.....	37
Total	381

The group under six years can hardly be judged from the psychiatric standpoint. So far as they can, the prognosis is good, since the physical health of only 2 is said to be "bad". Four more are classed as "indifferent"—i. e., suffering from malnutrition; so that 56 out of the 62 have good health. Fifty of these have a clear record for health and habits, and no difficulties.

All but 3 of the next group (6-10 years) go to school. These 3 are feeble-minded; 2 others are antisocial; physical health is reported as poor or indifferent in 14; and backwardness, insanity, neglect, poor vision, nervousness, poor articulation, obstinacy, temper, overindulgence, and fears are noted in 22 others—a total of 41 in 138 that have not a clean slate. But 70 per cent of this group have so far an encouraging record.

In the group from 11-15 years, another factor may operate to pull down the average on the clear slate—namely, possible conflict with law. But even with this factor included, 67 of the 94 have a clear record, the majority of them being in school and not a few earning money besides. Two are specially noted as being backward; one has developed dementia praecox; others suffer from overindulgence or are "nervous", sensitive, irresponsible, or syphilitic.

The group from 16-20 years shows 31 of the 50 to be normally progressive adolescents, while only 2 of the group are feeble-minded. The others suffer from "nervousness", have tuberculosis or nervous hearts, lack nourishment, are truants, seclusive, or antisocial, or have had minor conflicts with the law. Despite these handicaps, 39 out of the 50 are earning \$9 to \$25 a week (the remaining 11 being unemployed), the majority have completed at least grammar school, and many have gone higher.

In the group over 20, perhaps the most interesting of all, 26 have a good record. All but 3 are working and earning from \$12 to \$35 a week. Two are feeble-minded; one is dead after being hospitalized as a case of dementia praecox; one is "nervous" after the war. Only 2 are antisocial, and one is hampered by home conditions resulting from the mother's incomplete recovery.

We came across no hint of "nervousness" in the histories of the 82 children who died before the investigation. Most of them died under the age of five, and as usual with the young, infections predominated as causes of death. Our findings with regard to these 82 children are given in tabular form below:

CAUSE OF DEATH OF 82 CHILDREN

<i>Cause</i>	<i>Number</i>
Birth accidents.....	4
Starvation	5
Heart lesions.....	2
Infections	45
Accidents	9
Unknown	17
Total	82

AGE AT DEATH OF 82 CHILDREN

<i>Age</i>	<i>Number</i>
Under 1 year.....	51
2-5 years.....	17
6-10 years.....	8
11-15 years.....	1
16-20 years.....	3
Unknown	2
Total	82

The dementia-praecox patients, 5 in number, lie in the small group between the ages of fifteen and twenty-five, for the most part in the postpuberty period. While but two have had hospital residence with mental examinations, one other committed suicide at sixteen after trying experiences with an insane mother. These experiences, together with that of being shut in a room for sixteen weeks, led to shyness and living with books, so that when the child was put on a farm, his sense of direction and his ability to overcome obstacles of a physical nature were entirely undeveloped. Going for cows and getting

lost in the pasture were apparently unbearably disagreeable experiences, for suddenly he was found dead, floating in a stream.

The sister of this boy is another of the dementia praecox patients. She has been silly and emotional since the age of eighteen and has no goal or plan, drifting from one occupation to another, imagining sex assaults, and gossiping outrageously.

The fifth case is perhaps rather pre-praecox than really developed, but the boy's sensitive, shut-in, seclusive habits predict the type, although he earns \$14 a week and is helpful and obedient.

More detailed accounts of the histories of these five praecox cases may be of interest:

Case 1. The patient in this case was the father, an alcoholic. He was an illegitimate child, the son of a priest. At about the age of twenty-five he married, wife's age unknown. The mother was a nervous and irritable woman who had from 3 to 4 convulsions a month during pregnancy. Four children were born before the father's attack, which resulted in his commitment to a California state hospital. At the age of thirty-four he escaped. Later he came into the care of the Boston Psychopathic Hospital (No. 9709) and was committed to the Medfield State Hospital, where he died on October 7, 1918, at the age of forty-five. Of the four children, three died of infectious diseases, complicated in the case of two of them by convulsions (terminal). The fourth child was brought to the Boston Psychopathic at the age of fifteen (No. 10347), suffering from hallucinations. He was committed to the Foxborough State Hospital, but escaped in 1918.

Case 2. The mother, the patient in this case, married at nineteen and had three children. The father was alcoholic. The mother left him sixteen years before her symptoms began at the age of forty-one. At forty-five she came to Boston Psychopathic Hospital (No. 12771), and in 1919 was sent to Danvers State Hospital (No. 21661). She has been on no visits. One of the children died in infancy and another, who had been a dwarf from birth, at eighteen, of heart trouble. The third, a boy, left school while in the high school. He changed jobs frequently, but averaged \$20 a week. When he was twenty-two he came to Boston Psychopathic (No. 16361), and died at Boston State Hospital in 1922. An autopsy was performed.

Case 3. The mother was the patient in this case (Boston Psychopathic Hospital No. 9970). She married twice—once at twenty-five and again at thirty-one. Six children were born of the two marriages, all before the appearance of the mother's mental symptoms, which began when she was forty. The boy in question was a child of the first marriage. His father died of tuberculosis. The boy was always peculiar—seclusive, apathetic, and slow, shy, self-conscious, and very religious. He was a

masturbator. His peculiarities were intensified by the experience of being locked in a room for sixteen weeks by his mother. Sent to a farm at the age of sixteen, he was one day found dead in a stream. An autopsy showed no water in the lungs, and death was probably due to a spasm of the glottis. While there was no mental examination to establish the diagnosis, he was probably suffering from dementia praecox.

Case 4. A sister of the boy just discussed, a peculiar neurotic, religious girl who lies and is subject to fainting spells and has imaginary sex experiences. Her peculiarities are marked at the menstrual period. She was examined at the out-patient department of the Boston Psychopathic and showed an I. Q. of 67, mental age 10 8/12; her chronological age at the time was twenty-five. She was a good cook and is working as a domestic. We have placed her in the dementia-praecox group, but with a question mark after the diagnosis.

Case 5. The mother of this boy is full of fears. The paternal grandfather was "queer", and the aunts and uncles on the father's side were nervous. The father, who is the patient (Psychopathic Hospital No. 11326) has been more or less jealous, suspicious, seclusive, and moody all his life. He was committed to Westborough State Hospital at forty-four (No. 13961) and has not been allowed out on visits. The father married at twenty-seven. There were eight children, two of whom died of infectious diseases. Of the six living, one is normal and five are "nervous". The boy in question is peculiar, sensitive, shut in, but devoted and faithful. At the age of eighteen he is earning \$14 a week. We have classified him as a pre-praecox case.

If it is true that the "nervous" child of to-day may become the praecox patient of to-morrow and that "for many months, indeed in some cases for years, before the disease is recognized as such there are many symptoms premonitory of the actual disease, which may in some cases be so long protracted that the schizophrenic make-up may be fairly easily recognized during the early years of childhood and adolescence",¹ then the 12 cases of "nervousness" need watching. These 12 cases are retailed for the value they have in being so labeled by relatives, usually a reliable sign of difference from the other children in the family or the neighbors' children. It will be noted that whatever form the "nervousness" takes, it has not kept those of school age from attending school. Furthermore, the 4 over fourteen years old are contributing to their own support, their wages ranging from \$1.50 a week in the case of the fourteen-year-old to \$20 a week in that of the twenty-eight-year-old.

¹ See page 634 of Dr. McIntire's paper referred to on page 139.

"NERVOUS" (12 CASES)

<i>Parent</i>	<i>Age of offspring</i>	<i>Diagnosis</i>	<i>School grade</i>
Father	5 years	Restless and fussy	None
Mother	6 years	Excitable	First
Father	7 years	Fears, tics, lisps	Second
Father	8 years	Habit defects	Third
Mother	9 years	Sensitive	Third
Father	9 years	Fears, afraid to play	Third
Father	10 years	Light sleeper	Fourth
Mother	12 years	Cannot keep on subject	Sixth
Father	14 years	Bites nails, fears	First year high school
Mother	19 years	"Unlike sisters"	Second year high school
Mother	21 years	Nervous temperament	Graduated high school
Mother	28 years	Post-war neurosis	Graduated grammar school

The feeble-minded (4) are all children whose mothers were the patients, as was the case in 74 of the 86 deviators; the father was the patient in the case of 45 of the normal, the mother in 239 of the normal. These feeble-minded offspring are of low mental age, are very much overweight, and probably need institutional care. Two are under seven and are not in school; the other 2 are able to earn money, though their school period was meager in one case and unascertained in the other.

The backward or lazy have had early feeding difficulties or depleting diseases, or have suffered from eye defects, and show the effects of these health deviations in their school work. The sixteen-year-old is earning \$9 a week.

BACKWARD OR LAZY (12 CASES)

<i>Parent</i>	<i>Age of offspring</i>	<i>Diagnosis</i>	<i>School grade</i>
Mother	3 years	Talks indistinctly	None
Mother	7 years	Does not grasp school work	First
Mother	8 years	Cannot remember	Ungraded class
Mother	8 years	Restless, inattentive	First
Mother	9 years	Inattentive, lazy	Second
Mother	10 years	Speech defect, backward in classes	Third
Father	10 years	Falling behind in classes	Sixth
Mother	11 years	Lazy	Fourth
Mother	12 years	Repeated grades	Fourth
Mother	13 years	Repeated (5) grades	Fourth
Father	14 years	Slow in classes	Sixth
Mother	16 years	Repeated grades	Stopped at sixth grade

The physically diseased are undoubtedly for the most part recoverable cases, since malnutrition is the greatest difficulty in this group, and the heart lesions may be outgrown. It will be noted that only 4 have not been in school, 2 having died before school age, and the other 2 not having attained it. The 4 over thirteen are contributing to their own support, their wages ranging from \$9.50 to \$25 a week.

PHYSICALLY DISEASED (17 CASES)

<i>Parent</i>	<i>Age of offspring</i>	<i>Diagnosis</i>	<i>School grade</i>
Mother	1 year	Rachitis	None
Mother	1 year	Syphilis*	None
Mother	5 years	Rachitis, convulsions*	None
Mother	5 years	Mouth breather	First
Mother	6 years	Syphilis, rachitis	None
Mother	6 years	Malnutrition	First
Mother	7 years	Malnutrition	Second
Mother	8 years	Malnutrition	Third
Mother	8 years	Bronchitis	First
Mother	9 years	Underweight	Fourth
Mother	10 years	Malnutrition	Fifth
Father	11 years	Heart lesion	Sixth
Mother	12 years	Heart lesion	Seventh
Mother	13 years	Tuberculous heel	Sixth
Mother	18 years	No strength	Graduated grammar school
Mother	19 years	Heart lesion	Second year high school
Mother	23 years	Empyema	Graduated high school

* Deceased.

The cases of conduct disorders, varying from difficulties due to poor home control (15) through minor conduct disorders (9) to actual conflicts with the law (12), might be duplicated in any group of families. These conduct disorders vary from reactions to abuse or to spoiling and irritability to dishonesty, truancy, larceny, and immorality. Many of them are episodic in character; others are continuous. But they have not prevented the children of school age from going to school and the older ones from contributing to their own support, their wages ranging from \$16 a month to \$30 a week.

The parents of all of these children are distinctly not well-to-do; many are foreign born; for the most part their occupations belong rather to the class of unskilled labor than to the

skilled, and their financial provision for the future is exemplified in the emergency arrangements they make—*i. e.*, the sick member of the family is sent to the state for care. Therefore, the children are not as closely under medical care as more expensively reared children, and their developmental difficulties may not be as early corrected; they suffer somewhat from this. It has been frequently noted by Miss Clark that a "child has been less nervous since adenoids were removed" or after tonsillotomy. Then, too, inclement weather keeps the little ones from attending school and thus is a factor in promotion irregularities in the primary grades. "Moving" is also a frequent reason for failure to win promotion, and then there are illnesses, individual, epidemic, or endemic, which interfere with school work. With all these small handicaps, it is noteworthy that the general percentage of scholarship is high, there being but seven instances in which poor scholarship has been reported, not including the backward, who may be in a lower grade than their age warrants, but in all are doing fair work.

SUMMARY

- I. One thousand names of patients with the single diagnosis of dementia praecox were taken alphabetically from the Boston Psychopathic Hospital discharge cards.
- II. Nine hundred and twenty-five were of marriageable age. Two hundred and seventy-five married (5 twice), and of this number 194 were women.
- III. These individuals were all in the laboring class, usually in the less skilled occupations. Many of them were foreign born. Their offspring are of a slightly higher occupational level.
- IV. The final analysis rests on an investigation of 381 children (4 of whom have since died), the offspring of 136 matings.
- V. Of the 381 children, 86 deviate from the normal, either mentally, physically, or socially.
- VI. Of the 86 deviators, the mother had been the patient in 74 cases, the father in 12 cases.

VII. Of the 295 normal children, patients were the mothers in the case of 250 of the offspring, the fathers in the case of 45.

VIII. The majority of the 381 children, if of school age, are in school regardless of their deviations; those of older years are for the most part engaged in gainful occupations.

IX. The deviators consist of 5 dementia-praecox patients, 4 feeble-minded, 12 backward, 12 nervous, 17 physically diseased, and 36 cases of conduct disorders, a total of 86; 58 were under sixteen years of age, 28 over sixteen years.

X. The final conclusion remains *in statu quo*, since the 295 normals may show symptoms later, 234, or 79 per cent, being under sixteen, 61, or 21 per cent, over sixteen; *but to date they have shown none of the symptoms under discussion.*

XI. The value of this work will best be shown if those of the 377 who are still living are visited again in 1925 and in 1930, at which time the stability of those who now seem normal will be either proven or disproven.

ORGANIZATION OF OCCUPATIONAL THERAPY IN A STATE HOSPITAL*

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THE treatment of patients by suitable occupation is assuming a large place in state hospitals for mental disease. It is now generally agreed that occupational therapy, when joined with physical training and recreation, constitutes the best available method of treating the vast majority of chronic mental patients, and that it may also be employed with good results in many acute cases. It follows, therefore, that the state hospital that does its full duty will make provision for the therapeutic occupation of a large part of its patient population. The New York State hospitals and the progressive institutions of other states are engaged in making such provision as rapidly as circumstances permit.

The introduction of occupational therapy on a large scale in a hospital that has done little or nothing in this field will have a profound effect on the hospital organization. It involves the transformation of the hospital from a more or less passive institution to an active one. It means the addition to the hospital proper of a school of behavior that may ultimately become the largest and most effectual branch of the hospital work. Such transformation has already been wrought with good effect in some of the best state hospitals of Illinois.

Owing to the rapid development of occupational therapy since the beginning of the war, scanty attention has been given to the organization of the work, and a standard scheme of organization has yet to be devised. The suggestions offered in this paper are derived principally from my observations in New York State and the state of Illinois. The scheme of organization proposed is a composite one and is to be considered as tentative rather than final.

* Read before the Quarterly Conference of the New York State Hospital Commission with Superintendents and Managers, New York, December 8, 1921.

Occupational therapy, as the name implies, is a branch of medicine and therefore should always be carried on under the direction of hospital physicians. The superintendent is naturally the principal of the occupational-therapy school, but in large institutions it will be necessary for him to delegate the work of supervision to one of his chief medical assistants. The physician selected should have a deep interest in the work and enough knowledge and executive ability to carry it on smoothly and effectively. He would be responsible to the superintendent for the organization and conduct of the school; he would make provision for classrooms and workshops, for the purchase of supplies, and for the sale of finished products; he would confer with the physicians in charge of services and secure their active coöperation. He would oversee the work of the various classes and, subject to the approval of the superintendent, would make necessary changes in the courses of instruction and the staff of teachers.

At the head of the teaching force there should be a chief occupational therapist, a man or woman well trained in arts and crafts and skillful in dealing with mental patients. It is of the highest importance that the person chosen for this position should have enthusiasm, vision, initiative, tact, and a background of successful experience. The chief therapist would carry out the plans of the principal in organizing the school and closely supervise the work of the assistant teachers. He would have charge of the records of the school and make daily and monthly reports to the principal; receive patients from physicians and assign them to proper classes; promote and transfer patients with the approval of the principal; hold teachers' meetings; and do all in his power to promote the efficiency of the school.

The therapists or assistant teachers should be well trained for the work, either in schools of arts and crafts or of occupational therapy proper, and should have had practice work under supervision before being engaged. The number of teachers required will vary with the size of the hospital and with the number of patients who are able to receive instruction. A ratio of one teacher to one hundred patients would be none too large in most hospitals. At the Kankakee State Hospital there are now twenty-nine teachers with a patient

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population of about 3,300. As a teacher takes the place of an attendant and as the patients who receive instruction soon require less supervision, the establishment of the school will not increase the total number of employees. The pay roll, however, will be somewhat larger. When the school is well under way, the increased productivity of the patients and the saving in laundry, bedding, etc., should more than compensate for the added expense of maintaining the school.

Each teacher should be assisted by one or more attendants. The size of the classes will vary from twenty to fifty, depending on the mental condition of the patients and the nature of the work to be performed. Two physical instructors will be needed, one for the men and one for the women patients. Each instructor should have one assistant. These would work under the direction of the principal and chief therapist. In the larger hospitals there should be a director of amusements and a supply and sales clerk. A clerk should also be detailed to the chief therapist to keep the individual school records of patients.

The occupational-therapy school should be graded and there should be a regular line of promotion from the lowest to the highest grade. Each patient should be assigned by a physician to the grade best fitted for him, and his progress should be carefully watched. If he progresses rapidly, he should be promoted; if he makes no progress, a different assignment should be given him.

In the Illinois state hospitals the occupational-therapy course comprises six grades—namely, habit training, kindergarten, Grade C, Grade B, Grade A, and pre-vocational work. In all of the advanced grades, a large variety of work is offered so that each patient may be given suitable occupation.

The instruction should be mainly individual and should be carried on to fulfill the three principal purposes of occupational therapy—namely, to improve the patient's mental condition, to make him a contented and effective member of the hospital community, and to fit him for usefulness outside the hospital. While these purposes overlap and do not apply equally to all patients, it is well to bear them in mind, especially in planning courses of instruction for patients who are

expected to maintain themselves after leaving the hospital. Naturally there should be a happy blending of work, recreation, and amusement.

Whether the routine hospital work and the ordinary industries such as the shoe shop and carpenter shop should be incorporated with the occupational-therapy department is a debatable question. If these industries were well organized, they could give pre-vocational courses to convalescent patients about to be discharged and could be made highly serviceable to the institution.

The work in vocational training in the Jacksonville (Ill.) State Hospital is described in a recent report as follows: "We have in the neighborhood of 300 patients who are receiving vocational training. This includes carpentering, masonry, bricklaying, plumbing, electrical work, farming, gardening, tailoring, painting, stenography, bookkeeping, mechanical drawing, automobile mechanics, music and vocal training, and the making of brushes, brooms, furniture, etc. They receive instruction from employees, some few of whom are very efficient instructors. A large number of the patients have made rapid progress; some have left the institution and taken up the trade or vocation they learned while patients of the Jacksonville State Hospital, and are making a living for themselves and families."

I believe occupational therapy should be utilitarian so far as practicable and that the labor of the patient should be made as productive as is compatible with his physical and mental well-being. This means the organization of work so that each process, however simple, will contribute to the finished product. For example, in toy-making the separate pieces could be sandpapered in Grade C, assembled in Grade B, and painted in Grade A. The use of artistic designs will be pleasing to the patients and will add greatly to the sale value of the articles made. It must also be remembered that the production of saleable articles has more therapeutic value than the production of worthless ones.

Patients whose mental condition will not permit of their parole, but who acquire a high degree of skill and earn more than the cost of their maintenance should be rewarded. The nature of the reward would depend upon the individual pa-

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tient, but if the principle were adopted, the application could well be left to the medical authorities.

The records of the school should be so kept that at the end of each fiscal year a summary and analysis of results could be made. If such records were kept by all of our state hospitals, the groundwork of a science of occupational therapy would soon be laid and better methods and a more efficient organization would gradually be evolved.

In any scheme of organization, the necessity of making occupational therapy fit in with the other functions of the hospital must constantly be kept in mind. Occupational therapy is not to be regarded as a thing outside the institution, but rather as an organic branch of the hospital itself. Teachers, nurses, and physicians are co-workers, each having an essential part in the noble task of rebuilding broken lives.

MONOTONY

AMANDA BENJAMIN HALL

It happened all t' once one day when I was pitchin' straw
To bed the old mare. (It was fall an' nights was gittin' raw.)
I seen her starin' through the pane so kind o' childishly
It made the creeps go up my back. I tu'ned around to see
What caught her eyes, rememberin' the way they'd sometimes
gleam

When up the road from Centreville the dust would bring a
team.

But no, there warn't a thing in sight. I hurried to the door
An' opened it nor rightly knew why I had left the chore
Half done like that to go to her nor that the clammy sweat
All over me was but a dread o' what I'd never met. . . .
The kitchen shone as neat as wax. She always was a hand
To keep it so, but at that hour I couldn't understand
Why she warn't busy, why the stove was cold instead o' hot—
She'd never missed a meal on time if I was there or not.

"Twas close on sunset. As she stood her apron caught the
hue

An' made her look unearthly like. "Nell, what's gone wrong
with you

To make you stare that half-baked way?" I snapped, but
she stayed dumb,

Her face against the windowpane where the geranium
An' mignonette an' heliotrope she'd planted in a row
Looked reachin' out to catch the sun before it had to go!
I couldn't seem to bear that glory shinin' round her head
Nor her strange stillness. "Tell me, Ma, what's plaguin'
you?" I said.

She laffed then an' my blood run cold, because it was the kind
O' scary sound that women make when they have lost their
mind. . . .

An' so I had to send her off. . . . I've got her in a place
The state provides. The doctors tell me it's a hopeless
case. . . .

But to this day I'm blessed if I can tell what turned her
queer—

She hadn't stepped foot out-o'-doors for nigh on thirty year!

—*The Measure*

ABSTRACTS

THE BROADENED INTERESTS OF PSYCHIATRY. By Albert M. Barrett, M.D. *American Journal of Psychiatry*, 2:1-13, July, 1922.

In this presidential address to The American Psychiatric Association at their Seventy-eighth Annual Meeting, Dr. Barrett outlines the new fields of work that have opened up before psychiatry in the last few years and the responsibilities that have devolved upon psychiatrists in consequence. The public is interested in the mind and its problems as never before in the world's history, and the realization is growing that mental disorders are not confined to the formal psychoses that call for hospital care, but are to be found in varying degrees in every walk of life. Schools, courts, social agencies, industrial and military establishments, are beginning to recognize the psychiatric factors in their problems and to turn to psychiatry for help in solving them. In meeting this growing need, the hospital for mental disease has a leading rôle to play, in view of the circumstance that the historic development of psychiatry has largely centered about such hospitals. The interest of the institutional psychiatrist must no longer be confined to the patients who are committed to his care; his experience and training must be placed at the service of the community. Through out-patient departments, traveling clinics, and psychiatric wards in connection with general hospitals and dispensaries, facilities for the examination and treatment of mental disorders must be made as readily available as facilities for the examination and treatment of physical disorders. In many cases, early treatment will do away entirely with the necessity for hospital care; and many other cases can be returned to the community—with benefit both to themselves and to the overcrowded hospitals—if proper provision is made for extramural care and supervision. In this connection Dr. Barrett suggests that more effort than is customary might well be directed toward the social rehabilitation, through habit training, of patients of the dementia-praecox, manic-depressive, and paretic groups, who are often for long periods in no need of hospital care.

In any psychiatric program for some time to come, educational activities must have an important place. The public should be informed as to the factors that produce mental disorders and as to measures for assuring mental health. The psychiatric viewpoint should be urged upon all organizations that deal with behavior problems. Non-medical workers in fields that lie within the province of psychiatry should be trained to appreciate the interrelation of disease

with abnormalities of mind and character, to counteract the present tendency to place undue weight upon the part played by intelligence deficiencies in the production of behavior problems. Instruction in psychiatry should be included in the curricula of law schools, since "psychiatric experience, better than any other, points the way toward adapting the theory and practice of the law to the changing needs of human society". In the medical schools, above all, there is need for psychiatric training, even for those who do not plan to specialize in disorders of the mind. The general physician is in a position to do valuable work in the prevention of mental disorders if he has had a training that will enable him to detect such disorders in their incipiency.

Research work and the correlation of knowledge gained in various fields is important for any science, but especially so for psychiatry, with its complex problems centering around the efforts of the personality to adapt itself through mental functioning to the demands of its environment. While few mental hospitals have the resources for carrying on an extensive research program, almost all are in a position to make some contribution in this field. Dr. Barrett is of the opinion that mental hospitals would find it less difficult to secure the services of young men of ability if they would offer better facilities for research work and an atmosphere in which enthusiasm for such work could flourish.

The broadening interests of psychiatry are exemplified in the history of The American Psychiatric Association. "As the Association of Medical Superintendents of American Institutions for the Insane, it stressed in its programs for many years administrative problems, but in succeeding time tended more and more to show an interest in specific medical aspects of its work. It is of interest to note that it had from its earliest beginnings an appreciation of what we now regard as the social aspects of psychiatric work. Its programs usually carried discussions on medico-legal relations of insanity, and at its second meeting it undertook a statistical study of the interrelation of suicide with insanity. The change of the name of the association in 1892, when it became the American Medico-Psychological Association, marked the broadening of its interests and a more specific statement of its concern with mind in medical relationships. Again in the progress of time it comes to a new period in which psychiatry has shaped for itself a definite position as a branch of medicine, and as The American Psychiatric Association it starts on a new epoch in which its interests are extended to include all that concerns mental disorders in their widest relationships, as problems of disease and their social effects."

RESULTS OF VENEREAL DISEASE CONTROL. *Statistical Bulletin* (Metropolitan Life Insurance Company), 3:4, June, 1922.

Figures for industrial policy-holders of the Metropolitan Life Insurance Company during the last four years show a decrease in mortality rates for the venereal diseases. Since 1917 the rate for syphilis, locomotor ataxia, and general paralysis of the insane has declined 21 per cent, the figure for 1921 being 13.1 per 100,000 as compared with 16.6 in the earlier year. It is interesting to note that while there was a considerable increase each year from 1911 to 1917, there has been a sharp drop since then. This change is even more significant in view of the fact that reporting is more accurate on death certificates. The decline, therefore, has been accomplished in spite of better reporting. The decline seems to be most decided in the case of syphilis. The figures indicate that the difference between the rates for 1917 and for 1921 is chiefly accounted for by the lowering of the rates in the age period between twenty-five and fifty-five years. This improvement may be due to improved methods of treating syphilis as well as to the various measures of control established during the war by private agencies acting in coöperation with the government.

A STUDY OF THE VENEREAL-DISEASE PROBLEM IN NEW YORK CITY.

By Lesley W. Funkhouser. *Journal of Social Hygiene*, 8:307-26, July, 1922.

This paper gives the findings of an investigation conducted by the Subcommittee on Venereal Disease of the New York City Charity Organization Society during the six-month period from April to November, 1921. The investigation was undertaken as the result of a growing realization of the effects of the venereal-disease problem upon all phases of family and community life. Three aspects of the subject were studied—the venereal-disease patients themselves as they came under the care of the society, the facilities available in New York City for their treatment, and the present legislation bearing upon the problem. The data were obtained from case records of the society, visits to venereal-disease clinics, and interviews with state and city officials and private citizens interested in the problem.

The study of patients consisted of an examination of the records of 364 cases, the total number of venereal-disease cases, either diagnosed or suspected, under the care of the society during the two-year period from October 1, 1919, to October 1, 1921, comprising about 6 per cent of the entire case load during that period. One of the striking facts brought out by a study of this material was the increasing efficiency of social workers in recognizing and dealing with this problem. In 1921, 64 per cent of the diagnosed cases were taking treatment as

against 57 per cent in 1919; follow-up work, including a complete examination of all members of the patient's family, was carried on in 44 per cent of the cases as against 42 per cent in 1919; and examinations were secured in 44 per cent of the suspected cases as against 36 in 1919. It was noticeable, too, that increasing effort was being made to secure such details as source of infection, stage of disease, and the like. It was evident, however, that lack of adequate medical knowledge on the part of social workers often prevented recognition of venereal-disease cases as they appeared in the home, with the result that efforts at relief were misdirected.

Statistics compiled from the case records showed that the majority of cases were those of syphilis in the adult; gonorrhea figured very slightly, probably because it is less likely to come to the attention of the social worker. Ninety-one per cent of the syphilitic cases were in the third stage of the disease. The source of infection had been ascertained in only 23 per cent of the cases, the majority of these being infections of the wife by the husband. Fifty-seven per cent of the group were married, 21 per cent were widows, and 9 per cent deserted wives. In the matter of nationality, Italians furnished the highest percentage of cases—34, followed by the Americans with 23; negroes showed an unusually high incidence of venereal disease in proportion to their numerical prominence. The physical disorders that appeared most often in conjunction with venereal disease were tuberculosis, pelvic trouble in women, and general debility. Immorality, alcoholism, desertion, and shiftlessness were the principal correlated social factors. The importance of the problem from an economic point of view is evident from the fact that in 42 per cent of the cases studied, financial relief had to be administered because of the venereal-disease factor in the situation.

So far as could be ascertained, there are at present in New York City about 55 venereal-disease clinics and 6 hospitals with facilities for the treatment of the disease. Of these, 13 clinics and 2 hospitals were chosen for intensive study, the selection being made on the basis of extensive use by patients and also on the basis of efficiency from the medical standpoint of the American Social Hygiene Association and the social standpoint of the Charity Organization Society. Generally speaking, the following practices were found to be common to all the clinics:

1. Clinics are not restricted. Patients will be accepted without question from any part of the city.
2. No charge is made to patients who are unable to pay for treatment.
3. Wassermann tests are given direct if so requested, without the necessity of having the patient pass first through the general medical clinic.

4. Wassermann tests are not taken as a routine part of the general medical examination.

5. Diagnoses concerning patients can be obtained only by letter from the superintendent of the hospital, and as such are considered strictly confidential.

6. Treatment is given in courses, and no patient is considered discharged for a period of at least two years.

The clinics investigated are located all over the city and handle from 30 to 4,000 active cases, according to the size of the clinic. The doctors estimate that from 30 to 50 per cent of their patients discontinue treatment before being cured. All the clinics claim to make daily reports of their infectious cases to the department of health, but none of them use the department to secure compulsory treatment for such cases.

While the work of these clinics is steadily improving, there are a number of ways in which they could be made more efficient. Their outstanding needs at present are: 1. *Increased clinic space.* 2. *Increased personnel* (more doctors and trained laboratory technicians, and most of all enough social workers to carry on follow-up work adequately; it was found that the clinics whose social workers were able to give attention to this work showed the highest percentage of patients who continued treatment until cured). 3. *More adequate hospital facilities for the care of venereal-disease patients.* (This applies especially to the taking of spinal punctures, for which all clinics are dependent upon beds in general-hospital wards.) 4. *Reduction of clinic fees.* (The present charge for salvarsan treatment, ranging from \$1.25 to \$3.00 a dose, is practically prohibitive for the majority of the patients these clinics handle. The same thing is true of spinal punctures, the charge for which ranges from \$2.00 to \$4.00.) 5. *More free night clinics.* 6. *A more efficient record system.*

Legislation affecting the venereal-disease problem in New York City is administered almost entirely through the venereal-disease division of the bureau of preventable disease of the city department of health. The executive staff of the division consists of one doctor and two clerks, working under the director of the bureau of preventable diseases, which is independent of state control and absolutely responsible for the administration of venereal-disease legislation in the city. This legislation is fairly adequate; the weak point in the situation is its enforcement. The principal laws bearing upon the problem are as follows:

1. Compulsory reporting of all venereal-disease cases to the department of health. Largely disregarded by hospitals, dispensaries, and physicians. The chief single source of information with regard to the prevalence of venereal

disease in the city is the department-of-health laboratory, which in 1920 reported 13,150 positive cases of syphilis and 1,896 of gonorrhœa.

2. Compulsory examination, through the courts, of all persons arrested on the charge of vagrancy or immoral conduct. Well enforced.

3. Prohibition of publication in the press, or in printed matter to be carried through the mail, of advertisements regarding the diagnosis, treatment, or cure of venereal disease. A state law, generally well enforced.

4. Compulsory treatment of infectious-stage cases. Ineffective largely because few complaints are made under it; only one visiting nurse is assigned to the investigation of such complaints, and only 98 cases were reported in 1920.

5. Compulsory examination of food handlers. Examination may be made either at the occupational clinic of the department of health, which has a staff of nine physicians and seven nurses, or by private physicians approved by the board of health. During 1920, 17,143 food handlers were examined at the occupational clinic, and 55,673 by private physicians. Only 10 persons were excluded by the clinic because of an infectious syphilitic condition; 86 were placed on probation because of latent or inactive syphilis. Only 3 were excluded because of acute gonorrhœa and 28 placed on probation because of a chronic gonorrhœal condition. This ordinance includes masseurs, but not barbers, as does the state sanitary code.

6. Two provisions in the state domestic-relations laws. The first requires from applicants for a marriage license a signed statement that they have never to their knowledge been infected with venereal disease or if they have been so infected within five years, have been certified by laboratory test to be free from infection at the time of application. This provision is of slight value, as the signing of the statement is merely a matter of form. The second permits the annulment of a marriage to which one of the parties has been led to consent by fraud, and in one definite instance a marriage has been declared void under this statute because at the time it was celebrated one of the parties thereto deliberately concealed a condition of venereal-disease infection. This case is a valuable precedent for future action.

7. The provision of the federal-immigration law for the exclusion of any person afflicted with a "loathsome or dangerous contagious disease". This is enforced by means of the examination of immigrants at Ellis Island and the deportation of those who are found to be positively infected. It is less effective than it might be because of the more or less superficial character of the examination resulting from congestion and lack of adequate personnel. The further provision for the deportation within five years after entry of any alien who at the time of entry was a member of one or more of the classes excluded by law is practically impossible of enforcement in the case of venereal-disease cases, owing to the difficulty of proving that the disease was not acquired after entry. The law providing for a fine of \$200 to be paid by any steamship company that lands an alien found to have venereal disease offers additional assistance in securing stricter supervision of venereal-disease cases.

Other weaknesses in the handling of the venereal-disease problem in New York City brought out by the survey were the lack of facilities for institutional care of congenitally syphilitic dependent children and the difficulty of securing the admission of syphilitic patients to convalescent homes for temporary care.

OUTCOME OF 1,000 CASES PAROLED FROM THE MIDDLETOWN STATE HOMEOPATHIC HOSPITAL. By Maurice C. Ashley, M.D. *The State Hospital Quarterly*, 8:64-70, November, 1922.

This is a brief statistical study of 1,000 patients—392 men and 608 women—paroled from the Middletown State Hospital during the past ten years. The author first lists the 1,000 patients by psychoses, showing how many of each group were discharged and in what condition—whether recovered, improved, or unimproved—how many were returned from parole, and how many were still on parole (exclusive of reparoles and paroles of readmissions) at the time the study was made. Of the 1,000 paroled, 6 were without psychosis and were later discharged; 465 were discharged as recovered, 75 as much improved, 174 as improved, and 78 as unimproved. Eighteen who died on parole were included among the discharged under one or another of the headings. One hundred and twenty-six patients were returned to the hospital, and 76 were still on parole. The manic-depressive, dementia-praecox, and alcoholic groups led in the total number paroled (299, 207, and 80 respectively); the manic-depressive and alcoholics led in number of recoveries (204 and 52 respectively); and the dementia-praecox and senile groups in number of returns (49 and 16 respectively).

Investigation of the subsequent histories of the 798 discharges yielded the following data with regard to economic condition: 346 were self-supporting (able to do as competent work as prior to their illness); 233 were partly self-supporting (working irregularly and incompetently); and 173 were entirely dependent (not only incapable of work, but in need of constant care and supervision); the economic condition of 46 was unascertained.

The social histories of the discharged cases were as follows: 561 had no social difficulties; 182 had social conflicts; 9 committed suicide; the histories of 46 were unascertained. Social conflicts include friction with family, community, or employer of such a nature as to be called to the attention of the hospital authorities; maladjustments resulting in arrest for such offenses as vagrancy, assault and battery, forgery, swindling, and the like; extreme poverty; alcoholism; desertion by husband or wife; immorality; and so forth. The number of suicides is high in view of the fact that patients who might be suspected of suicidal tendencies are not paroled. So far as is known, there have been only 15 marriages among the discharged cases, and only 27 discharged patients have had children, including 3 who bore illegitimate children.

Of the discharged patients, 535—over half of the total number paroled—have lived continuously outside of an institution since their

discharge, 28 have died, 188 have been readmitted to hospitals for mental disease, and 7 have been admitted to other institutions; the facts with regard to the other 40 were unascertained. Adding the 126 returns from parole to the 188 discharged patients who were readmitted to hospitals gives a total of 314 patients who were eventually returned to hospitals. This is nearly one-third of the total number paroled—a high proportion in the author's opinion. It raises in his mind the question whether patients are paroled too soon, before they are ready for it, or whether, on the other hand, they are kept too long in the hospital, so that they become institutionalized and unfit for contact with the outside world. This latter difficulty he thinks may be obviated by intensive occupational therapy.

THE IMMEDIATE PSYCHOLOGICAL EFFECTS OF TOBACCO SMOKING. By David June Carver. *The Journal of Comparative Psychology*, 2:279-302, August, 1922.

The study reported in this paper was made in the psychological laboratory of Johns Hopkins University during the year 1919-1920. The subjects were undergraduate students in the university with the addition of the author and one other member of the department staff. While it was impossible to maintain absolute control of the subjects outside of test hours, their conditions of living and working were ascertained to be fairly constant, and they were given specific instructions with regard to the regulation of their daily routine. On days when any unusual conditions of health or work had been experienced, testing was omitted.

Two procedures were adopted and used as checks upon each other. In the alternate-day procedure, the reactor was required on one day to smoke before taking the tests and on the next to take the tests without having smoked, and so on. In the before-and-after procedure, the test hour was divided into two work periods with an interval between; on one day the reactor smoked during the interval and on the next rested without smoking. The amount of smoking during each test was not very thoroughly standardized. Each reactor smoked either one cigar or three cigarettes of well-known brands; the cigars were smoked down to one-quarter or less and the cigarettes to stubs. It was felt that any very fine control of the tobacco used would be more or less meaningless, in view of the fact that smokers vary so widely in regard to time of holding smoke in the mouth and depth to which it is drawn in mouth, throat, and lungs.

Eight types of test were used: card sorting; two kinds of mathematical work (addition and multiplication); the operation of an adding machine in ordinary listing; an association reaction (oppo-

sites); dart throwing; the steadiness test; and billiard playing. The number of reactors used in each test varied from two to seventeen. Each of these tests is given in detail in the present paper. The author feels that the value of these tests lies principally in the fact that they raise problems and indicate possible directions and methods of research. He draws the following general conclusions from the results of the work:

1. The indications are that the immediate effect of smoking, both on habitual smokers and non-smokers, is a lowering of the accuracy of finely coördinated reactions, including association thought processes. Against this, in certain cases, must be set the possible decreased accuracy of the habitual smoker when he has been for some time deprived of his customary tobacco-combustion products, which might tend to prevent the appearance of the normal effects of smoking.
2. There is no indication that smoking affects the speed of complicated reactions, or that thoroughly mechanized reactions requiring no fine motor adjustments are affected. This would apply to the motor and thought processes of the man in an ordinary clerical position or to those of a chauffeur. It may be a different matter with men engaged in intellectual work.
3. If smoking has any effect upon speed of reaction and upon efficiency in routine activity, it cannot be detected by tests of the type used in this study, which are samples of the usual psychophysical tests. To complete the experiment, testing should be done with the type of test devised by Professor Dunlap for use in the Air Service in measuring the effects of asphyxiation; tests of this kind will reveal mental changes that the older forms of test fail to reveal.
4. Study of the immediate effects of tobacco smoking is only a small phase of the necessary research program. Investigation must also be made of the remote effects; of habituation to regular smoking; of the immediate and remote effects of deprivation; of the effects upon men as compared with women; and finally of the effects upon the learning process as compared with those upon habitual reaction.
5. Further research work must be more extensive in the numbers and types of reactors employed and more intensive in the amount of measurement of each individual reactor. Methods and technique must be much more refined.
6. Physiological changes—if any—due to smoking should be investigated and correlated with the mental changes.
7. For a thorough research, provision should be made for keeping reactors under control as regards diet, rest, mental and physical work, sex activity, and the like, for long periods of time.

THE CLINICAL ACTIVITIES OF THE CONNECTICUT SOCIETY FOR MENTAL HYGIENE. By William B. Terhune, M.D. *The American Journal of Psychiatry*, 2:273-84, October, 1922.

Dr. Terhune, who was formerly Medical Director of the Connecticut Society for Mental Hygiene, prefacing his account of the society's clinical activities by a short discussion of the value of these activities in relation to the other undertakings of the society. He feels that in every phase of its work, progress has been largely due to its clinical service. He finds it significant also that the financial condition of the society has improved coincidently with the increase in its clinical work.

The case records gathered for the files of the society through the clinical work are of considerable value as an indication of the nature and prevalence of mental disease in the community. The patients either came of their own accord or were referred from such varied sources as welfare and church organizations, factories and stores, general and state hospitals, orphanages, schools and colleges, police departments, penal and correctional institutions, city and state departments of public health and of public welfare, Red Cross chapters, and women's clubs. Up to September 1, 1921, 2,483 patients had been referred to the society, 1,609 of them during the two last years.

Three clinics are in operation at present—one in New Haven, one in Waterbury, and one in Stamford. The first is conducted two afternoons a week, the second one afternoon, and the third once a month from ten in the morning to three in the afternoon. All three are conducted by one psychiatrist. Every patient receives a physical as well as a mental examination. His environment also is carefully investigated by a psychiatric social worker, usually between the first and the second visit to the clinic. No diagnosis is made until all these examinations and investigations have been completed. When the diagnosis is made, the patient is either treated in the clinic, referred to the social-service department or to other organizations, sent to a hospital, or dismissed with the assurance that no mental disorder exists.

Such clinics offer splendid opportunities for special studies in the two rather neglected fields of incipient mental disorders and mental states arising during physical illness. The clinics of the Connecticut Society are carrying on several such studies, among the most interesting a study of unsuccessful attempts at suicide.

Dr. Terhune concludes with a number of case histories, to illustrate the nature of the society's clinical service.

BOOK REVIEWS

PSYCHOANALYSIS AND SOCIOLOGY. By Aurel Kolnai. Translated by Eden and Cedar Paul. New York: Harcourt, Brace, and Company, 1922. 185 p.

The effort to find correlations between the sciences of sociology and psychology has led not a few writers into highly interesting paths of conjecture which the psychologist is unable to recognize as useful contributions to social psychology; but we should not necessarily begrudge them the satisfaction they are afforded thereby. Westermarck claimed for the school of evolutionary sociology "the right to psychologize", and lesser scholars cannot be blamed for yielding to the temptation to psychoanalyze society, since that is the easiest form of armchair psychologizing. The reviewer's chief charge in this matter is that the psychoanalyst does not furnish a key to the understanding of many social phenomena when he offers theories on borrowed ethnological material, any more than he does by his own often too cautiously chosen observations. This fault was shared by Flügel's *Psychoanalytic Study of the Family*, and is even truer of the present volume, which is a more superficial work; indeed, the title is quite too ambitious for it.

While admitting that psychoanalysis is still far from exercising an exhaustive or even an extensive influence in the domain of sociology, the author claims the intention of throwing light on the foundations of social development in general and upon political movements in particular. Having thus limited himself, he cannot be justly criticized for failing to take into consideration the numerous social institutions and forms of social behavior that occupy the major attention of sociologists.

Questions of the nature and limits of the parallelism between the individual and the social mind, the values of analogies between individual and social psychoses, he leaves to others' dissertation, but he does not hesitate to assume the truth of such premises in anticipation of future investigators' findings.

The first chapter explains the sense in which the author conceives that psychoanalysis can serve sociology—(1) by disclosing the reactions between the individual mind and the community, (2) by providing a method of securing for the individual better balance or adaptation to the environment, and (3) by establishing a higher rationality in the mutual relationships of individuals.

His chapter on the analysis of the mass mind is based upon the Durkheim mechanical social-solidarity theory. That the author should adopt this as best correlating with psychoanalytic doctrine without mention of contrasting theories excepting Spencer's is hardly fair to current sociological research. The Freudian view, too, is alone presented that the chief factor in the preservation of family relationships and homogeneity is the universal desire for incestuous sexual activity, with the socially imposed struggle against it and the resultant compromises. Even Westermarek's well known theoretic basis of exogamy is ignored in the discussion. In the references to researches in totem and taboo, Wundt finds no place, nor in fact is there any attempted survey of the long recognized problems of the group mind. Curiously scant space is devoted to the Freudian interpretation of myth and its analogy to dream wish fulfilment, or to fable, or to the comparison between religion and compulsion neuroses which surely demands more than mere allusion in any discussion of this school purporting to deal with the mechanism of collective ideas.

The connection between society and the father as the one who represents the first important inhibitions and commands, the gradually ensuing cleavage between them, the analogical conflicts with patriarchal dominion, and the consequent origin of repression and self-critical judgment, are traced. Then follows a résumé of the development of neuroses through the exercise of parental discipline and the traditional regulation of sexuality.

Students of revolutionary and reform movements should by all means take into account analytical explanations of their motivation, but should ever be on guard against accepting enthusiastically *a priori* pronouncements for fact. The author acknowledges that psychoanalysis sponsors as normal many revolutionary doctrines in education, religion, and ethics, while it diagnoses as abnormal certain revolutionary trends in political thought. Yet several of its exponents testify to its being in spiritual touch with liberal socialism.

The second part of the volume is devoted to a psychoanalysis of the "social psychoses", anarchism, communism, and Bolshevism. The prototype of all revolt is rebellion against the father (society's coercion) and the correlate of slaying the father is incest with the mother. But individualist anarchism holds the idea of complete emancipation from outside control, hence cannot satisfy the great aim of regression, and is therefore a philosophical absurdity. Bomb throwing is the act of parricide, perpetrated by individuals and not by social coöperation. Communist anarchism, however, does not aim at the abolition of all external influence, for its ideal is brotherhood, an unsatisfying erotic

compensation for incest gratification, leading to the necessity for making concessions to the despotic principle.

Anarchistic communism, on the other hand, is inclined to make extensive use of the coercive powers of the state, and is more scientifically in accord with the facts of paternal authority; for this reason the regressive element is less extreme. Yet it is, after all, only a compromise between the father principle and the mother principle, bearing the same relationship to anarchism as paranoia to dementia praecox.

The proletariat as a class is no longer agricultural, and having become separated from the soil, yearns to return to it, the mother, and unite itself to a huge family community. This is the essence of infantile El Dorado fantasy, the very climax of conflict with reality. Particularly incompatible is this aim, the author avers, with communism's dream of hypertechnical progress in industry.

In Marxism and Leninism he sees paranoid symptoms, egoistic and persecution trends, withdrawal of inhibitions, less sharply defined than in anarchism. Kolnai formulates an axiom: the more extensive the regression toward the ideal of an embryonic condition of undeveloped organization, the less successful will the philosophy prove.

All this bears on its surface a certain apparent logical consistency, but, throughout, the treatment is exasperatingly confused by the author's constant shift in meaning of terms, variations in terminology for the same thing, bi-polarity of conclusions, and loose generalizations. To quote a few of his very sage remarks: "Quite a number of anarchists are dogmatic vegetarians and teetotalers." "Young people of the anarchist-communist persuasion like to dress simply and yet conspicuously; they wear gray jerseys; the young men have long hair and the young women very short hair. These manifestations lead us to infer the existence, in part of narcissism and in part of bisexuality." Would not the author be perturbed at sight of the youth of our colleges, country clubs, and summer camps?

Recent articles undertaking to psychoanalyze radicalism¹ (Stewart Paton's *Psychology of the Radical*¹ and A. B. Wolfe's *Motivation of Radicalism*²) have assumed, and probably fallaciously, that all radicals are for some reason inferior and unable to compete successfully or are victims of prejudice and legal inequality. Granting that thwarted ambitions, resentments, and personal grievances against society are the germs from which these movements spring, Kolnai contends that they are fundamentally ultrareactionary! To prove

¹ *Yale Review*, October, 1921, Vol. 11, pp. 89-101.

² *Psychological Review*, July, 1921, Vol. 28, pp. 280-300.

this, a few notorious avowed representatives of these unorthodox groups—convicted criminals and pathological literary celebrities, prohibition advocates, and reformers—are selected for scrutiny.

We owe the development of psychoanalysis, says the author, to those who "were satiated with phrase-making concerning the nervous system" (page 11), and yet where can psychoanalytic discourse be found more packed with the technical jargon and highly esoteric language of the tribe than in this small book? It is doubtful if the average reader of this journal, whom we presume to have no slight acquaintance with psychoanalytic literature, will be able to penetrate through the words to the thought on first perusal, though he have no need to consult the glossary for specific help.

MIRIAM C. GOULD

Vassar College.

JUDGING HUMAN CHARACTER. By H. L. Hollingworth. New York: D. Appleton and Company, 1922. 263 p.

The title of this book may prove misleading to some, owing to the popular tendency to think of a man's character as something quite distinct from his intelligence. As the term is here used, character means essentially "the characteristic modes of behavior, the characteristic attitudes, reactions, and capacities", which of course depend as much on the intelligence of the individual as they do on his instinctive or emotional tendencies. And since character is not some hidden substance or mysterious spiritual essence, but a man's actual behavior when all of his conduct is considered, it follows that prolonged acquaintance gives as direct a perception of character as it does of the qualities of foods and climates or the properties of physical objects.

"Judgment of character, as distinguished from its perception, is a more indirect process, in which, from a momentary observation or cross section of the life of another, we attempt to estimate its general quality and tenor. Judgment in this sense is diagnosis. It relies on symptoms, signs, clues, and incomplete evidence. It is an inference from the quality of a detail to the quality of the larger whole."

The author has given a good deal of attention to the problems of vocational psychology, and it is chiefly from the standpoint of the worker in this field that his book is written. The various methods used by employers in arriving at an opinion in regard to the qualifications of those seeking employment are considered at length. Investigations have been made to determine the value of judgments based on the letter of application, the photograph that the applicant is frequently required to send with his letter, the personal interview,

and the recommendations obtained from those who are acquainted with the applicant. The results of such investigations go to show that judgments arrived at by these traditional methods are apt to be very haphazard and unreliable. The author discusses how and why such methods fail and what can be done to improve them. The use of formal psychological tests, as might be expected, is also considered at length. No detailed description is given of any of these tests; the author merely undertakes to give the reader an understanding of the functions that such tests are meant to serve, the extent to which they have so far proved of value, and the principles involved in their construction and practical application.

The problem of judging human character is undoubtedly one that warrants the wide attention it is receiving at the present time. If we are to give the individual child the training he requires, we must first have some knowledge of his needs and possibilities. If we are to place a man in work suited to his abilities, we must first have some way of judging what these abilities are. In the present volume, Professor Hollingworth has undertaken to tell something about the work the psychologist is doing in an attempt to solve this problem and the degree to which, thus far, his efforts have been meeting with success. The book is written in a clear and simple style and should prove interesting not merely to psychologists and psychiatrists, but to teachers, employers of labor, and all who may be interested in the problem of so training and placing the individuals who make up our social structure that each will attain in that structure to his highest possible level of usefulness and personal satisfaction.

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THE FOUNDATIONS OF PERSONALITY. By Abraham Myerson, M.D.
Boston: Little, Brown, and Company, 1921. 406 p.

Dr. Myerson's sizable book falls just short of being fully satisfactory, and this is a great deal to say about a discussion of the foundations of personality. The author has done much to supply information with a psychiatric coloring to laymen; to interest the reader in a genially discursive way in the various facets of human character, which he describes with soundness and with wisdom—and in a very personal manner.

A synopsis will show how much ground the book covers. After discussion of the organic and environmental bases of character, there are descriptions of the various aspects of mental life, from memory to wishes; an account of the development of character under the headings of purpose, sex, work and play, religion; and finally descriptions of some character types taken from life.

Now this is indeed covering ground, and the general statements of the preceding paragraph deserve explanation in some detail. "Mind and character" "are functions of the entire organism", and the author takes time (and exclamation points) to discuss the wonders of the internal secretions as they manage the entire organism. Always worth attention are his comments on fatigue, alcohol, illness, and the effect of matter over mind—especially in children. But character is also founded upon the "social heredity" and influenced by the group that insists to the death that the new born shall accept their own habits and beliefs. Then follows a consideration of efforts to win the praise of the "gang" or of God, to obey the conventions which may balk other fundamental desires. This leads to a definition of conscience as the reaction to a near or distant tribunal, as "a medley of motives, purposes, and teachings, varying from grotesque and mischief working to the sublime and splendid". As in so many expressions of opinions, we are told that we can solve problems while we sleep, as if it were not possible that the problem was solved, in the morning, by our being fresh and able to go about it in the right way. For some pages the book approximates a textbook of psychology, with interesting digressions and admitted assumptions. It pays its respects to Freud and "the Pollyanna tribe".

In the building of character, Dr. Myerson regards as important a camouflaged desire for power and a wish to be conventional—the latter found most among "Bohemians". Chapters on work and sex illustrate the effect of these strivings and their complications. Later disharmonies in character are classified.

The book ends with character studies in which a psychiatrist competes with or supplements novelists and the writers of those keen little character sketches that appear so often in our magazines.

EARL D. BOND.

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BISEXUAL LOVE; THE HOMOSEXUAL NEUROSIS. By William Stekel, M.D. Authorized translation by James S. Van Teslaar, M.D. Boston: Richard G. Badger, 1922. 359 p.

Stekel's particular contribution to the literature on sex is a development to its logical conclusions of the theory proposed first by Kiernan, and later by Chevalier, Lombroso, and Binet, and finally by Freud, that each and every person is inherently bisexual. "There is no inborn homosexuality, and no inborn heterosexuality. There is only bisexuality. All monosexuality is other than normal and natural." Stekel goes further and says: "Monosexuality already involves a predisposition to neurosis, in many cases stands for the

neurosis proper." It is this relationship between monosexuality and neurosis that Stekel discusses most fully in support of his rather new theory. The homosexual he finds invariably neurotic.

There are to him two particular reasons for the development of this neurosis. First, he maintains that there is in the individual who does not develop along the usual lines in sex an inborn increased sex instinct. Like Lombroso, he feels that the homosexual is one who primarily is a recessive type, with precocious and powerful sex instincts. What is inborn is not the homosexuality or the heterosexuality, but the bisexuality in an intensified form. Each individual has before him the possibility of developing an interest in either sex or both sexes or neither sex. Those with an excess of sex instinct are more likely to develop in other than the normal way, the determining factor fundamentally being the necessity for the inhibition of a part of the unusual amount of sex interest. Up to puberty there is likely to be an undifferentiated period, when nothing unusual is observable except an undue interest in all aspects of sex.

A second factor is necessary, however, before the direction of the sex interest is determined. This comprises all the varieties of experience that the individual undergoes. Early in life the sex instinct meets the necessity for inhibition, often earlier than usual in those with uncommonly strong sex instincts. There are the same possibilities for them as for others, except that adjustment is more urgently needed. They may either act on their impulses, or learn to sublimate them or to repress either or both components of their bisexual nature. To the extent that they become monosexual or ascetic through repression, they become neurotic. This accounts to him for the fact that all homosexuals, and probably many heterosexuals and ascetics, become neurotic, the tendency being in exact proportion to the repression. While the excess of sex instinct is recessive, the type of repression is determined on purely psychic experience. This would place in the same class with the homosexual the heterosexual and the ascetic who are neurotic in that they have repressed rather than sublimated part of their bisexual nature.

Those who are not neurotic are those who succeed in sublimating instead of repressing. The normal individual, leading a normal life, acts upon his heterosexuality and sublimates his homosexuality. The monosexual, and often also the ascetic and the heterosexual, are neurotic in that they possess unusually strong sex instincts which have not been properly handled. Thus, although the foundation for homosexuality would be constitutional, its actual occurrence would not be due to any one cause, but to one or more of many. Furthermore, its actual occurrence would not be inevitable if circumstances

and training could be such as to favor its sublimation rather than its repression. Finally, in spite of its actual occurrence, its continuation would not be inevitable in view of the results of psychoanalysis in uncovering the repressions and redirecting the sex instinct. "The proper therapeutic course would be to remove the inhibitions which stand between man and woman, to make him *de facto* again bisexual, and heterosexual for all practical purposes."

"Since no person completely overcomes his homosexual tendencies, every one carries within himself the predisposition to neurosis. The stronger the repression, the stronger is also the neurotic reaction which may be powerful enough in its extreme form to lead to paranoia (Freud's theory of paranoia). Homosexuality comes to the forefront if heterosexuality happens to be the component repressed. If, on the other hand, a homosexual, instead of repressing his heterosexuality, completely sublimates it, he appears as normal in his psychic life as the normal heterosexual. Both still have, however, a latent disposition to neurosis, unless sublimation is maintained continuously. Friendship, nationalism, social endeavor, group activities, form satisfactory types of sublimation which the normal heterosexual adopts often without guidance or difficulty. There may be in the individual who has much homosexual craving to repress a degree of repression that renders him neurotic and a degree of sublimation that amounts to an overcompensation, so that the neurotic may at the same time advance beyond his generation and become a creator of the future."

Stekel believes that the process of sublimation is more difficult for the normal homosexual. "That is why this type is extremely rare, and why a thorough analysis always discloses typical neurotic reactions." This is Dr. Stekel's main contention—that the individual who has disgust or hatred or scorn for the opposite sex proves his affectively determined negative attitude. "A normal homosexual—if there be such a type—would be indifferent towards women", and not a neurotic.

Stekel's definition of a neurotic is interesting: "I call a neurotic the person who has not successfully overcome the asocial cravings which he perceives to be unethical. Asocial cravings are all instincts which society rejects as conflicting with its cultural demands." Greenwich Village philosophers, the world over, would question his use of the word "unethical" and the reference to "society's cultural demands". Stekel's conception of society is not at all that of a devouring beast bent on crushing out every spark of individual freedom, but is more that of a kind and wise mother determined merely to permit all of her children the amount of freedom that will bring the greatest good to all. The exercise of the sex function according

to instinct he does not consider an individual right, to be accorded the individual at all costs to the group as a whole. "The laws are a protection of society against the instinctive cravings of its members." This is interesting from the pen of one who is describing the neuroses that result from repression. "The neurosis is the result of the struggle between instinct and inhibition." Yet he does not, as do some of the unworthy followers of Freud, advocate removing the inhibition in order to get rid of the neurosis. Three paths are open, as he shows. Acting on the instincts without inhibition makes the criminal, according to society's standards. "Society tolerates but a portion of the instincts to a certain extent . . . all others it outlaws as asocial." "This is the meaning of the struggle of the centuries between brain and cord." Most people take a second path—that of partial sublimation and partial repression, making most people somewhat neurotic. The path of most difficulty, but best results is of course that of sublimation of all asocial cravings, and acting only on those that society accredits. The one who has the strongest sex instincts and to that degree "represents a conquered stage of civilization" by their sublimation grows to represent the future stage of civilization.

Stekel finds the consciously homosexual only about 2 per cent of the population, and he considers all the rest, 98 per cent, latently so. The conception of latent homosexuality has been greatly enlarged by psychoanalysis, although it was recognized before. The reason for its remaining latent is that the social necessity for its repression is very great. "No other component of sexual instinct undergoes repression to such an extent or shifts so far from the sphere of ordinary consciousness. Possibly a great deal of the opposition to the new psychology has its roots in this very peculiarity of human nature. Their basic bisexual disposition is precisely what men are least disposed to recognize." Their sexuality of any variety, we might add! "The normal is everything that is natural, and from the standpoint of nature we are never monosexual and always bisexual."

The behavior of the neurotic who is repressing homosexual trends is discussed in much detail by Stekel. Whatever his behavior, it is founded on certain fundamental principles. The first of these is that the sexual instinct is independent of its object—that it is aroused independently of an object, and that the object changes from time to time and under varying circumstances. The second principle is that every individual tends to sum up all his instinctive cravings in one image. "Man's unattainable ideal is the whole instinct." A third principle is the differentiation between a psychic sexual craving which Stekel calls *erotism*, and a physical one which he calls simply *sexual-*

ity. An undue sexuality may be of either of these kinds. And there may be repression of either or both varieties of emotion, or even sublimation of either or both. A fourth principle is that circumstances and family influences, as they tend to inflict psychic trauma, tend to direct the current of sex instinct. A fifth is the early development of motives that act with quite the power of the conditioned reflex—the biological "wish" conditioned by circumstance and experience.

There are various masks for latent homosexuality and various compromises that enable the individual to readjust his longings and needs to circumstances. Sometimes they are quite within the scope of society's demands, sometimes not. It may be sufficient to fall in love with an atypical member of the opposite sex. Stekel believes that most homosexuals are atypical in appearance. Bloch and Bluehner find many homosexuals among pure sexual types, however. Sometimes the homosexual is satisfied in having for the object of his love the less differentiated types of the opposite sex, represented by the aged or the very young. The compromises and substitutions become more masked when they include onanism and various paraphilia. Not uncommonly they are entirely masked in phobias and compulsions that bear no apparent relation to sex. Many social difficulties, such as an inability to get on with employees or servants or even acquaintances of the same sex, are due to masked homosexuality. Stekel refers to "the uneasiness which persons manifest when they try to cover an erotic attitude". The man who can fall in love with no woman but the wife or sister of his best friend may be transposing his homosexual longings for his friend. The fear of infection, Stekel shows, is often a mask for homosexual craving, especially the fear of syphilis.

"In order to acquire psychological insight into every case, it is necessary to answer the question: what does the homosexual aim to accomplish with his actions?" The answer is often found in the attitudes developed early in life in the family circle. Statistics show a varying attitude toward the members of the family. It was thought earlier that the repression of the mother imago, which every woman is alleged to reproduce, was the sole cause of homosexuality. Now Stekel and others hold that it may be due to other inhibitions, and that these inhibitions may change from time to time or even disappear. When the attachment to the mother is present, it is undoubtedly the cause, but it is not always present. Stekel has found that if the father is the strong parent, there may develop a sort of competitive struggle between father and son, a mixture of admiration and antagonism that may start a conflict between sexuality and eroticism. The son

may become an active homosexual, identifying himself with the male ideal. If the father is strong and dominates the mother, there may be aroused an "ethical will" which makes the boy say: "I would not rule and be like my father: I would rather be like my mother." He may in this case become homosexual and passive, if at the same time he loves his tyrannical father. If the mother is stronger, the wish to be a woman, whom he considers the dominant factor, may influence him, or, in similar circumstances, he may evolve a "male protest" to flee from woman when she clashes with the male will to power. Undoubtedly these types of reaction may not involve merely the family, but early close associations of other kinds. Sometimes the love for the mother absorbs all love for the female sex. The passive homosexual identifies himself either with the mother or her polar obverse, the prostitute. An interesting development resulting from the mother complex is a type of heterosexuality that involves merely the prostitute, giving total absence of libido with respectable women, who are included in the inhibitions that surround the mother.

How may the homosexual be cured? Not many wish to be cured, for they have usually reached the safe haven after much conflict, and feel, when they have reached it, that they are normal. Their anxieties they attribute to society's attitude toward their habits. They are often aided in establishing homosexuality by mistaken parents, who observe the leaning and foster it, thinking they are making the path easier for the child. Yet since they are essentially neurotic, a cure should be attempted. Stekel says: "Homosexuality does resemble ankylosis. The free operation of sexuality appears to be restricted; a single point is fixed and every movement takes place thereafter only within the range of that point of fixation. Is it possible for psychoanalysis to loosen up such psychic ankylosis and to free once more the bound-down energies?" Repeated instances are given by Stekel, and they may be duplicated in the works of other writers, to show that when grossly homosexual interests are thwarted, ideal interests come strongly to the fore. An endeavor to make the homosexual heterosexual by repression merely changes one neurosis for another. The endeavor to turn him bisexual meets the course of social development—heterosexual in act and homosexual on a sublimated level. This is accomplished naturally by the individual who has a good balance between instinct and inhibition, and in whom early experiences are favorable. But in those who are overwhelmed by intense instincts and tossed about by experience, only painstaking analysis will suffice.

Dr. Stekel's book is interesting and valuable in that he shows more clearly than usual that all love has its foundation in an essentially bisexual nature, and that all unusual manifestations of the love in-

terest may be directed early, or redirected later, into a sort of bisexual love that meets the requirements of civilization.

FLORENCE MEREDITH.

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HEREDITY AND CHILD CULTURE. By Henry Dwight Chapin, M.D.
New York: E. P. Dutton and Company, 1922. 219 p.

Dr. Chapin has written a book of faith—of faith in child culture. Nor is it blind faith. From his many years of experience, Dr. Chapin has developed a seeing faith. Aware of the many difficulties, he is also aware of the many possibilities of raising life from its own minimum to its own maximum level, given any sort of heredity. Because heredity is fixed, he does not find this a reason for idly lamenting its limitations.

In view of present biological knowledge, the attitude of many seems to be: Do the best you can, but do not hope for much. Dr. Chapin's attitude seems to be: Do the best you can and hope for a great deal.

In a book of this size, most subjects must be dealt with lightly. Yet no important aspect of child culture has been omitted, from the prenatal time on. Dr. Chapin's views are essentially those that are coming to be held to-day. He includes a discussion of education and of other aspects of mental and moral culture, and of the social development of the child, as well as more distinctly physical points.

Particularly interesting is his discussion of the Speedwell System for the care of dependent children. Dr. Chapin emphasizes the fact that even the best institutional care of children is not as good as even an average home. "The little child craves love." "The bad results [of care in infant asylums] are not due to lack of kindness or attention, but to the fact that the whole system is wrong." He draws attention to comparative mortality rates of those cared for in homes and in institutions, and concludes that the carefully selected foster home offers the best chance for the dependent infant. This discussion is followed by an excellent chapter on the adoption of children.

To those who know Dr. Chapin's own personal and professional career, the practical way in which he has carried out his theories, and the success that has attended his work, this book will be welcome as a summary of his working plan. To all upon whom the privilege of child culture falls, it ought to be suggestive and stimulating.

FLORENCE MEREDITH.

Woman's Medical College of Pennsylvania.

MENTAL CAUSES OF ACCIDENTS. By Boyd Fisher. Boston: Houghton Mifflin Company, 1922. 315 p.

Fisher's book constitutes an attempt to study and analyze the psychological factors that tend to produce industrial accidents.

The opening chapter groups the major causes of accidental injuries under the following five headings: ignorance, predispositions, inattention, preoccupation, and depression. Their explanation could have been more definite, and one is left somewhat confused by the intrusion of material that is only distantly related to the subject matter. For instance, the somewhat superficial discussion of the function of the adrenal glands serves to detract from the clearness and sequence of the presentation.

The second chapter, entitled *The Puzzled Mind*, concerns ignorance as a producer of industrial accidents and explains some of the obvious factors that give rise to stupidity. Lack of knowledge of the English language and mental deficiency are principally emphasized.

The section entitled *The Misguided Mind* is a plea for the use of more refined methods of examination of the special senses. The reaction time should always be noted. More attention should be given to the testing of touch, pain, heat, cold, pressure, muscle-joint, and position sense. The advice to investigate the function of the semicircular canals of those who work in high places is worth while, but the implied recommendation that an attempt be made to attune the individual worker's sense of rhythm with that of the machine at which he works seems to partake of the theoretical and impractical.

Under the title *The Stubborn Mind* are included the workman who is too prone to take chances, the one whose mind is in the grip of resentful inertia, the fatalist, the chronic "kicker", the radical, and so forth. These mental attitudes are viewed as outlets for thwarted emotions, and it is suggested that helpful alternative avenues of egress be substituted for the troublesome ones.

The next two chapters seek to separate any given piece of work into component phases. A certain portion of it should be automatically performed through repetition or habit; a second subdivision should call for slight, but immediate variations; and, finally, the job should possess a "value" or interest element. It is somewhat doubtful if the type of workman who can be taught more or less absolute automaticity is often capable of reaching the aesthetic considerations involved in an intellectual and emotional evaluation of his product. Conversely, the superior employee is not apt to remain long in a position where mere automatic repetitive movements are essential. Rewards for increased output, competition, rest periods, and recreation are advanced as means of heightening the "value" phase of labor.

Chapters eight and nine dwell respectively on the evil effects of emotional crises, including mental abnormalities and physical disease, on the accident curve. The usual suggestions as to the value of hygienic surroundings are made. The author feels that actual fatigue dependent on severe physical exertion is rare and that reduced output is not a satisfactory measure of fatigue. He points out that dissatisfaction or boredom may produce an apparent fatigue state which is, therefore, often due not to unusual effort, but to a failure to use up available energy.

In the tenth chapter, headed *Accident Hygiene*, there is an ambitious plan to formulate a system of accident prophylaxis. Eight types of remedies are listed: (1) job analysis, (2) improved working conditions, (3) better selection and assignment, (4) training, (5) organization, (6) periodic personal surveys, (7) individual adjustment, and (8) accident "post-mortems". Some of these are impractical. The scheme for the "post-mortem" consideration of an accident is excellent.

The final chapter contains suggestions for psychological reference reading.

Although *Mental Causes of Accidents* contains some information that has a useful application to the study of industrial risks, yet the subject could have been presented in a clearer and more concise manner. Furthermore, it is scarcely possible to pigeonhole psychological causes of accidents as the author has attempted to do. It is very likely that we are dealing with total reactions rather than restricted ones. No doubt, Fisher had this in mind, but unfortunately the manner of presentation does not sufficiently emphasize this broader conception. The study would have gained in value if there had been a better understanding of clinical psychiatry.

EDWARD A. STRECKER.

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HUMAN EFFICIENCY AND LEVELS OF INTELLIGENCE. By Henry H. Goddard. Princeton: Princeton University Press, 1920. 128 p.

Dr. Goddard's thesis is that "the chief determiner of human conduct is a unitary mental process which we call intelligence" and that human efficiency, as measured by social adaptation, is dependent principally upon this factor. In support of his belief, Dr. Goddard cites data obtained by the use of intelligence tests, with especial emphasis on some of the earlier army statistics. His argument would have been strengthened had not his book been published before continuation of the work of compilation, which later included among the army material a correlation of intelligence levels and occupations. In

these more recent statistics we find much valuable information, but although suggestive for practical application, even it does not incline us to a whole-hearted acceptance of this author's position.

Dr. Goddard makes the common error of overrating the intellectual and underrating the emotional and instinctive mechanisms. There are one or two paragraphs in his book that rouse in us the hope that he is about to give us a sane evaluation of these different factors, but we are disappointed. After admitting that the emotional make-up of the individual bears some relation to his efficiency, Dr. Goddard adds:

"While all this is profoundly true, it must not be overlooked that the level of intelligence to a large degree determines the extent to which the individual either controls these tendencies of his emotional life or fails to control them . . . while . . . we may not say that one's efficiency is entirely proportional to his mental level, we can at least feel safe in declaring that a low mental level will exercise little or no control over the emotional life and therefore the instincts and emotions which would tend to inefficiency will have full force instead of being modified and controlled as they are by higher intelligence."

To those who have worked with school children or with vocationally maladjusted individuals, studying each case from the viewpoint of personality make-up and emotional characteristics as well as by the use of mental tests for the determination of intelligence levels, this thesis is manifestly erroneous. Dr. Fernald has shown that the ability of the individual to adapt himself to the community life depends quite as much upon the habit formation and conditioned emotional responses of the individual as upon his intelligence level (unless his deficiency be of so low a grade as to render him inadequate to care for himself). He tells of many cases in which individuals with a mental age as low as seven, eight, and nine years are satisfactorily earning a living outside of institutions and are well behaved members of the community. Vocational-guidance researches point more and more to the conclusion that in many individuals who rank as superior in intelligence by the army tests or the Stanford-Binet, minor emotional disturbances or conflicts are sufficient to mar efficiency and produce as marked maladjustments as would innate mental defect. While it is true that many delinquents are mentally deficient, still more are mentally unbalanced in emotional ways. We need only recall the well-known figures of Glueck in respect to the prisoners at Sing Sing, where of 608 studied, 28.1 per cent were found to be defective as against 12 per cent who were frankly insane and 18.9 per cent who were psychopathic. These figures would indicate that emotional imbalance was at least as frequent a concomitant

with criminal tendencies as mental defect. Nowhere have we evidence in harmony with Dr. Goddard's statement, quoted above, that intelligence is capable of controlling the emotional life, for emotional instability is found in connection with all degrees of intellectual capacity.

It must not be supposed that Dr. Goddard is ignorant of such facts as these. He mentions emotional conflicts and mental disorders in the course of his discussion of delinquency, just as he mentions instances of mental defectives paroled from Vineland and making a satisfactory economic and social adjustment. The point is that he fails to appreciate the full significance of these and other similar facts, and does not realize that they inevitably invalidate the thesis that he seeks to maintain. One feels that his point of view is colored by long absorption in researches that dealt primarily with problems centering in mental deficiency, and that he has a tendency to neglect the vast field of instincts and emotions which so many other psychologists have stressed and which are undoubtedly powerful factors in determining human efficiency.

PHYLLIS BLANCHARD.

Mental Hygiene Clinic, Monmouth County (New Jersey) Organization for Social Service.

BIOLOGY OF SEX FOR PARENTS AND TEACHERS. By T. W. Galloway, Ph.D. New York: D. C. Heath and Company, 1922. 149 p.

Dr. Galloway, formerly Professor of Zoology at Beloit College, is now associated with the American Social Hygiene Association. This book is a revised edition of one published for parents and teachers in 1913 as a text on sex education. It fulfills its function completely and satisfactorily. The general principles of the problem are well presented. Details as to the time and manner in which sex instruction should be given are clearly set forth. Dr. Galloway sees in sex education something more than a few fundamental facts and warnings to be handed out to children at definite times or ages. It is to him a part of general education, to be begun during the first few years of life and continued until late adolescence.

He rightly emphasizes as a prerequisite for the teacher that his own sex house be set in order, to free him from the unwholesome early conditioning of the topic which has been almost universal. To aid those who wish to employ a technical method of approach, there is included an embryological discussion of reproduction and development, with easily understood drawings.

The work is essentially for the more educated classes. Simple-minded parents might be appalled by the subtleties here facing them.

A simplified manual would be useful. The book should be read and unhesitatingly recommended by the medical profession.

MARTIN W. PECK.

Boston Psychopathic Hospital.

THE LAWS OF SEX. By Edith Houghton Hooker. Boston: Richard G. Badger, 1921. 373 p.

This volume is a comprehensive treatise on the subject of sex, dealing with all its phases, biological and philosophical, historical, medical, legal, and moral. Through these general avenues of approach is reached the main purpose of the work, which is to present a constructive program for the solution of that baffling triad of problems, immorality, prostitution, and venereal disease.

The book is well written and has high literary merit throughout. Physical sexuality is discussed as a fundamental human component, and by the very quality of its treatment is lifted from the plane of indecency, coarseness, and taboo to one on which it merges harmoniously with the finer human relationships. It is books of this sort that help the lay mind to grasp the personal significance and dignity of the sexual instincts. In spite of the most frank and detailed handling of the material, there is nothing in the book to stimulate the prurient or offend the sensitive.

When the author discusses the social aspects of sex, the unbiased attitude of the scientist has to contend at times with the burning zeal of the reformer and the uncompromising stand of the champion of women. She decries a double standard of morality without qualification or reservation. Modern methods, official or otherwise, for the regulation of prostitution she finds wholly unsatisfactory. Compulsory examination and detention of diseased prostitutes she feels is worse than useless. Prophylactic treatment as carried out in army and navy she believes is of little value and fundamentally wrong on moral grounds. She is rather severe on the medical profession for their inadequacy in the face of these problems. On the whole she has little patience with any of the "man made" attempts to deal with them, and points out inconsistencies, fallacies, and injustices that in truth leave little chance for rebuttal.

The solutions that she advocates are perhaps sounder in logic than in practical application. Venereal disease as a public-health problem should be handled like any other communicable disease, with official reporting and quarantine. Rigid enforcement of antifornication laws should be carried out, with severe penalties against both sexes. Women officers should be used in this enforcement if men prove inefficient on account of their too liberal views on sex offenses. To

give money to a prostitute should be a misdemeanor equally punishable with prostitution itself. Marriage should be made more difficult, divorce in certain cases easier, and birth control given sanction. Thorough and detailed sex education in early childhood is advocated. The main reliance for the future is placed on the hope of change in standards of chastity among men. "Before the end of another century it may be predicted that prostitution will appear as grotesque and impossible a relation between the sexes as the earlier customs of marriage by capture or marriage by purchase now seem to civilized human beings."

Space precludes any really critical review of this book. It is on the whole an able and valuable contribution to the literature of sex. It will do much to stimulate intelligent interest and activity and at the same time produce a healthy unrest in the overcomplacent. If there are faults, they are amiable ones: on the one hand, the impassioned voice of a courageous, far-seeing woman eloquently portraying the social injustice suffered by her sex; on the other hand, an over-optimistic idealism as to the possibilities of human progress.

MARTIN W. PECK.

Boston Psychopathic Hospital.

DIRECTION OF HUMAN EVOLUTION. By Edwin Grant Conklin. New York: Charles Scribner's Sons, 1921. 247 p.

The biologists are beginning to leave their place as scientists to take on the rôle of prophets. Professor Holmes' book *The Trend of the Race* was, however, far less divergent from the mere facts of biology than is Professor Conklin's impressive book *The Direction of Human Evolution*. Holmes deals with heredity, germ plasm, body plasm, birth rates, and the like, and remains very close to the confines of biology or its branches, medicine and anthropology, but Conklin sets sail into sociology, polities, religion, and especially attempts to apply biological criteria to such expeditions of the human spirit as are manifested in democracy.

Accepting the truth of organic evolution as established, the author lays down certain truths—that evolution is not new formation, but transformation (but he practically nullifies the value, though not the truth, of this statement by saying that new combinations give rise to new qualities), that evolution concerns itself with germ plasm—and discusses in brief, but authoritative fashion, the rôle of environment in evolution, the rôle of social inheritance. As a result of evolution, certain paths of progress have resulted: (1) increasing bodily complexity, (2) increasing intelligence—and increasing social organization.

He then discusses Man, the one creature whom biologists (excluding anthropologists and physicians) know *least*. After briefly tracing racial types, he states that "in the long run supremacy will pass in every community, nation, or race to the more capable, the more ethical, rather than the best livers". Nevertheless, he views with alarm the almost certain disappearance of racial boundaries that transportation and the like are sure to bring. Convinced as he is that such mixtures as produced the Anglo-Saxon and the like were good, he is quite skeptical about the value of the crossing of more divergent stocks. His apprehensions would undoubtedly be shared from a different angle by yellow and black biologists.

He is convinced that man's physical evolution has almost reached its limit and also that mental evolution in a forward direction has ceased; in fact he gloomily states: "Increasing size of brain and complexity of nervous organization lead to mental and physical instability and disharmony, and the great increase in nervous and mental diseases in modern life warns us that there is a limit to intellectual evolution." But to social evolution there is no limit, and the biologist, viewing the huge experiments that societies are constantly trying on themselves, is frankly apprehensive. Dealing briefly, but pertinently, with democracy, ethics, religion, and such matters from the standpoint of evolution, he justifies democracy while admitting its defects and dangers, and while proclaiming the right of science to question all ethical and religious validities, he comes to very amiable agreement with the professors of ethics and religion.

To the reviewer a useful book, but not at all an original one or, despite its title and its distinguished author, a very profound one. We may grant the right of biology to embrace the whole field of man's life and yet, in view of the experience and training of biologists, question their conclusions in the complex matters of sociology, psychiatry, ethics, and the like. Forecasts of the direction of human evolution are interesting, but a new bit of science evolved by a biologist playing with germ plasms, or a release of power affected by some physicist yet to be born, may make waste paper of all such forecasts.

A. MYERSON.

Tufts Medical College.

INSANITY AND MENTAL DEFICIENCY IN RELATION TO LEGAL RESPONSIBILITY; A STUDY IN PSYCHOLOGICAL JURISPRUDENCE. By William G. H. Cook, LL.D. London: George Routledge and Sons, Limited; New York: E. P. Dutton and Company, 1921. 192 p.

This is an unusually able book on a subject little discussed. Much that has been written in forensic psychiatry has been on the question

of *criminal responsibility*; little has been written on *civil responsibility*, the subject of this book. The author has studied with evident care such decisions as have been made in the British courts (and to some extent elsewhere) on the status of "mental deficiency" in relation to Tort and to Contracts as of Agency, of Insurance, of Partnership. There are, also, chapters on Marriage, Divorce, Testamentary Capacity and Evidence of Insanity, an appendix summarizing the chief powers and duties of lunacy and mental-deficiency authorities in England, and one containing suggestions for the reform of lunacy and mental-deficiency administration. Although in his title the author uses both the terms "insanity" and "mental deficiency", the terms in the text would seem to be used more or less synonymously, which, in view of the usage that has grown up about the term "mental deficiency", is a bit confusing.

The book is rich in the citation of case material, and will be found valuable as a book of reference. To the American attorney or psychiatrist, however, its usefulness will be limited because of the unfamiliar terms used. English psychiatry has largely followed the Maudsley classification of mental diseases, while in the United States Kraepelin has been followed. Then, too, there is a growing tendency in this country to get away from too formal classification of any kind, in the belief that what good comes of it has largely been obtained and that more will be accomplished by trying to "understand" a patient than by merely attempting to "classify" him. The classification still taught, however, is largely the Kraepelinian. Cook, following the English terminology, uses diagnostic terms that have not been heard in a psychiatric clinic in this country for many years; the younger psychiatrist will have little knowledge of what they mean except as he can gather it from the context; the lawyer will be entirely lost. This difficulty places a distinct limit to the use of the book in the United States, although it in no way detracts from the fundamental value of the research Cook has made and the material he has brought together. His scholarly discussion of the material, in which he points out the difficulties and confusion that arise from the varying points of view, the discrepancies between decisions, the lack of logic in some instances and the blind following of logic to the point of absurdity in others, and the like, should help to bring a more orderly method into this important department of jurisprudence.

The book contains an excellent topical index, an index to cases, and a table of the statutes cited.

FRANKWOOD E. WILLIAMS.

The National Committee for Mental Hygiene.

THE STAGES OF HUMAN LIFE. By J. Lionel Taylor, M.R.C.S. New York: E. P. Dutton and Company, 1921. 377 p.

Aside from the books that appear now and then, "Published by the Author", from the printing plants of small newspapers or job-printing houses, this is the oddest book one will find in a long time. It merits a few lines of review, for although one may not admire the book, one must admire—one must salute—the some one who performed the astounding feat of getting it published by a reputable firm. It is evident that all the funny books are not listed under "Humor" nor all the mysteries confined to detective stories.

One notes the dignified title. The size and general appearance of the book are in keeping with the title. The table of contents is not unimpressive; the division is into three parts, the first general, the second on personal hygiene, and the third on developmental hygiene. The first section contains four chapters, each on an important topic: I. *Method of Study. The Disinterested Inquiry into Human Circumstances*; II. *Personal, Public, and Racial Hygiene*; III. *Physiology, Sanitation, Hygiene Care, and Welfare Spheres*; IV. *The Outlook of Health and Disease*.

There is an evening's work, we thought—with a little regret, for we wanted to be reading Ludwig Lewisohn's *Up Stream* (one of the truly significant books of the year, we believe). But Part I was no obstacle at all. Glance back at the titles of the four chapters. Now watch—see how easily it is done: Chapter I—five and one-half pages; Chapter II—two and one-half; Chapter III—a bit taxing, as the last part spills over slightly on to the eighth page; Chapter IV (yes, really, I'm not fooling; you can see it in the book)—*The Outlook of Health and Disease*—ONE PAGE!!

Chapter I (five and one-half pages) is divided into five sections: *Nature and Humanity*, *The Greek Period*, *Modern Medicine*, *Natural Processes Give Rise to Disease and Death as to Health and Life*, *The Naturalistic Point of View*. *Nature and Humanity* is covered by a two-and-a-half-line quotation from Darwin and two lines from Wordsworth; a quotation from Berdoe's *Origin and Growth of the Healing Art* (p. 172) to the effect that Hippocrates first recognized nature in the treatment of disease does for the *Greek Period*; Berdoe also has to stand sponsor for modern medicine with a four-line quotation (p. 381) to the effect that Thomas Sydenham inaugurated a new era in medicine; the responsibility for the fourth section is given to Sir James Paget, researches into whose *Memoirs* (precisely, the second edition, p. 179) reveals the statement that "to degenerate and die is as normal as to develop and live". The whole of Part I—seventeen pages.

By this time we had given up the idea of *Up Stream*, for we were

now curious and were having a pretty good time as it was. It was an interesting group of emotions that we were experiencing, a mixture of curiosity, amusement, amazement—we looked back several times to see if really the Dutton mark was on the book—and admiration. Of course we didn't read the book—one couldn't do that—but we browsed about (one can do quite a little browsing in 377 pages) and were constantly edified, for we learned much about book making.

The book has no appendix where appendices usually are; there are many appendices, but they are attached to various "chapters". Chapter V, for example, *The Problem of "Know Thyself"* (three and one-quarter pages) has an appendix of about ten pages, an odd miscellany of quotations long and short, from the *Psalms* and *Hamlet* to—well, not to anything—just more *Psalms* and *Hamlet*, only with credit to Pendlebury Houghton's sermons, Channing, Erichsen, and the like. Throughout, the author keeps to the admirable plan of saying what he knows about a subject and then stopping—*Individuality, Temperament, and Other Endowments* (Chapter IX), four pages; *Self-fulfillment and Environment* (Chapter XI), three and one-quarter pages, but with pages and pages of bootless quotations in an appendix.

The author has evidently kept a scrapbook for many—we should say very many—years. It may have been very difficult, of course, to get any order out of the cluttered accumulation, and we should probably praise him for the success he has achieved. After all, it isn't what one accomplishes in this life that counts, but the difficulties and obstacles one has overcome in achieving at all. On the other hand, our praise is held back by the question that forces itself, why publish one's scrapbook at all? But then that is not a question for us to answer—it is a question for publishers.

The author promises more volumes. If the publishing of scrapbooks is to become the vogue, there should be more competition. All of us have books of collected scraps, drawers and files of disconnected notes, and the books of our libraries are full of passages checked and underlined. Most of us, I suppose, keep this material for such incidental use as it may have; that—if we could find a good title, such as *Lifts from Life*—it was marketable as a source book had never occurred to us. But if good publishers will accept this material almost as it is, without demanding of us that we tie the various items together with even so much interstitial tissue as Christopher Morley and F. P. A. use in putting together their daily "columns", there is no reason why, before the manuscript for the next volume comes over from England, some of the rest of us should not have ours on the list to compete with it. Such books, it occurs to us, might well be

placed in libraries among the *intime* books, and rather than "Source Books" a better subclassification would be "Idiosyncratic Confessions".

FRANKWOOD E. WILLIAMS.

The National Committee for Mental Hygiene.

A HANDBOOK OF MENTAL TESTS. By F. Kuhlman. Baltimore: Warwick and York, 1922. 208 p.

This is a revision and an extension of the Binet-Simon tests. The author has sought to correct defects in the original tests. They measured too high at the lower and too low at the upper end of the scale. He has also sought to standardize methods of giving and of scoring the tests, in order to minimize the personal equation of the examiner as a factor in the resulting mental age. He has made a serious effort to get away from the school-training and school-knowledge element in the tests and to make them reveal the native capability of the individual, leaving out as much as possible results of training. He has also sought so to form the tests as to reduce to a minimum the element of communicability.

To achieve these purposes, *performance* tests have been introduced in abundance. They replace some of the tests in the original Binet series that required verbal responses. The author has eliminated nineteen of the original tests. The scale has been extended, giving tests for three months, six months, one year, eighteen months, and two years. For the years from three to twelve inclusive, there are eight tests each, even for eleven years, which was omitted in the last Binet-Simon scale and in the Stanford Revision. There are eight tests for the years from thirteen to fifteen. To make the processes of testing and of scoring more objective, much of the scoring is made to depend upon the *time* used in performance and the *accuracy* (counting errors) of the performance. A stop watch is almost a necessity for the examiner using these tests.

As examples of the displacement and addition of tests, for year six we find only three of the Stanford Binet-Simon tests: (1) distinguishing between right and left and (2) between morning and afternoon, and (3) mutilated pictures. From the five-year tests of the Stanford Revision, we find in the six-year series of Kuhlman (1) æsthetic comparison and (2) execution of three simultaneous commands. The first mentioned is made somewhat easier than in the five-year Stanford series. Three new tests are added to the six-year series: (1) counting pencil taps made by the examiner, (2) imitating the folding of a paper square, and (3) tapping blocks in the order shown by examiner (Knox Pintner Cube Test modified).

In the eight-year series, on the other hand, there are three tests from the eight-year series of the Stanford Revision: (1) similarities, (2) counting backward, and (3) vocabulary. Counting backward is made harder, twenty seconds and one error being allowed. The vocabulary is modified by taking fifty words, apparently the easiest of each of the two Stanford series of fifty each, and allowing credit for twenty of these correctly defined. One eight-year test here is the stamp counting given as an alternate nine-year test in the Stanford Revision. Comprehension is a new test which consists in drawing lines from the center of a square to the corners and middle points of the sides, after these points have been carefully pointed out on the figure to be used. Three other new tests complete the eight-year series: (1) opposites (ten words, time and error scoring), (2) folding a paper square five times, and (3) counting dots.

The chapters headed *Conduct of an Examination* and *Directions for Giving the Tests* aim to make these tests available to and usable by the untrained examiner. Any intelligent person who carefully studies these two chapters should be able to give the tests and to score them properly.

The author emphasizes the distinction between mental testing and mental diagnosis. He clearly realizes that these are different processes. Despite this, however, his discussion of the meaning of intelligence quotients (p. 16) offers itself as an example of the psychologist's fallacy. No mental diagnosis can be made on the basis of an intelligence quotient alone. Even the mentally deficient individual has a personality as well as an intelligence. Psychology properly applied must measure capacity for social adjustment.

The chapter entitled *Principles of the Year Scale* emphasizes the importance of *discriminative capacity*. On the basis of this fundamentally important characteristic, tests should be selected and placed in the scale. Discriminative capacity means serviceability in distinguishing between different degrees of mental development. This scale is the result of more than 7,000 individual examinations. Two thousand pedagogically normal school children have been measured by these studies in order to form the scale. In this chapter the author exhibits the mechanics of the formation of the scale, the logic by which it came into being. It is a most important part of the work. It will appeal to the psychologist rather than to the beginner in testing.

As to abbreviation of tests, the author recognizes that it is not necessary to give the eight tests ordinarily required for each of the years in order to arrive at a useful statement of mental age. He recommends that the tests be given in the order numbered in each year. Even where the whole eight of each year are to be used, he

recommends giving only four in succession for any given year. Without stating any figures as to relative accuracy when smaller numbers of tests are used for each year, he states that two, three, four, or five tests per year will give mental age with a degree of accuracy in general corresponding to the fraction of the whole number used. The implication is that where any less than the whole eight are used, it is desirable to use them from one onward. Accuracies of abbreviations should be worked out.

In the appendix, the author contributes a table of intelligence quotients from 25 to 150, for ages from three years to maturity, and for mental ages from 3 to 15 inclusive. The book needs an index and would be improved by an author index. An element of serviceability would be contributed by a condensed list of the tests by years of age.

These tests constitute a very serviceable addition to the armamentarium of the worker in applied psychology. The scale is useful in emphasizing *performance* as an index of developing mental capacity. Dr. Kuhlman's scale is likely to displace to a considerable extent some other scales more generally in use at the present time.

THOMAS H. HAINES.

The National Committee for Mental Hygiene.

THE HISTORY OF PUBLIC POOR RELIEF IN MASSACHUSETTS, 1620-1920.

By Robert W. Kelso. Boston: Houghton Mifflin Company, 1922.
200 p.

This interesting little book opens with an account of the English background of poor relief and then proceeds to an all too brief consideration of the social foundations of New England, treating thereafter in greater detail of inhabitancy and the genesis of the settlement law, the modern law of legal settlement in Massachusetts, the town poor, absorption of relief functions by the state, and the department of public welfare, and concluding with the subject of child care and the child-placing system in Massachusetts.

The rigors of pioneer existence, combined with the effects of the continental transportation system, caused the towns to resort to harsh methods of self-defense against the ever-increasing numbers of dependents. Thus the lot of the town's poor was hard in the early days and only gradually ameliorated. No social treatment was provided because modern social work had not developed. The contentiousness of the towns in dealing with dependents is illustrated by the case of Taunton and Plymouth when one John Harmon was to be "entertained" a year by one town, then a year by the other, and so on alternately. In Hadley, the Widow Baldwin was boarded out, to remain a fortnight in each family—"to go from Samuel Parker's,

Senior, southward, and round the town". Poverty was not distinguished from pauperism. The "town cow" was often assigned to a poor family as a measure of relief.

This book will be valuable to social workers because of the sweeping perspective of its view. It will be useful to students for its careful footnotes. The title of the book and even the chapter headings are misleading in that they seem to promise a "history" of poor relief. As a matter of fact, the author's treatment is much more restricted, since no adequate account is given of the social-economic factors associated with the policies and practices of various periods. The chronology of legal development is clearly traced, but the reader is disappointed at the absence of statistical tabulation of an historical character that would show clearly the main tendencies in administrative change. The reader is also entitled to expect, from such an eminent authority as the author undoubtably is, some attention to the development of social treatment and social practice. Considered as a history of the development of the legal aspects of poor-relief administration in Massachusetts, the book is a valuable contribution.

F. STUART CHAPIN.

University of Minnesota.

SOCIAL WORK IN THE LIGHT OF HISTORY. By Stewart Alfred Queen.
Philadelphia: J. B. Lippincott Company, 1922. 327 p.

Social Work in the Light of History provides the reader with a pleasing variation from the usual exposition of social-work problems. The author, who is professor of sociology at the University of Kansas, beginning with a review of the outstanding social-work movements of to-day and the progress that has been made in each particular field, suddenly transports us back to the Middle Ages and takes us step by step through the slow progress that has gradually led to present-day methods of social work, pointing out for us skillfully and intelligently how these small, clumsy, and often rather stupid beginnings have developed into modern technique and constructive planning. The reader receives more than he had bargained for. He not only gets the story of the evolution of social work, but he also finds himself acquiring a very good side light upon the social life and problems of medieval Europe. Professor Queen has told his story in a clear, vigorous style that carries one through from beginning to end without the slightest fatigue.

Of course no review would be quite complete if it did not pick a few flaws. The serious defect in the book is that the author has attempted to cover the leading social-work movements of to-day in so small a space that he sometimes fails to give us a well-rounded picture. At

times one feels that he perhaps does not know the facts in connection with certain of the modern movements in social work quite as well as he knows their historical background. He would have done better to have given us less of the past and more of the present.

For instance, in his discussion of councils of social agencies, which is brief and incomplete, he makes the statement that "in Chicago and Milwaukee the council is considering the question of joint purchase of supplies", overlooking the fact that certain other cities already have central purchasing departments in connection with their councils. Similarly the discussion of financial federations falls short of covering the subject. The reader gets but a limited conception of the growth and development of the movement, of its advantages, and of the objections that are sometimes raised against it. One might very well conclude, after reading the paragraph on financial federations, that there was no important federation except that in Cleveland. There is no mention of the tendency toward the organization of functional groups, such as children's bureaus, recreation councils, and public-health federations.

The discussion of industrial housing pictures some of the early developments, but does not disclose the status of industrial housing at present, nor does it give a very good idea of the successes and failures that have attended the movement. In his discussion of housing legislation, the author has apparently been influenced largely by the attitude of those who have no confidence in housing legislation. He says, "it has been largely of the 'Thou shalt not' variety and has rarely provided for the construction of houses to meet the shortage or to displace those that need to be torn down". True—but housing legislation has not been initiated primarily for either of these purposes. Its primary purpose is to see to it that existing housing is improved so far as possible by legal compulsion and, more important still, that all dwellings hereafter constructed shall be so built as to provide the reasonable requirements of good housing.

City planning and zoning are mentioned, but it would be quite impossible for any one unfamiliar with the fundamentals of this subject to understand from the four paragraphs devoted to it the significance of the movement or how it is related to social work.

In the chapter devoted to the settlement movement, the author lists a number of activities which, he states, have developed directly from this movement. For such activities as those of the Playground and Recreation Association of America, the War Camp Community Service, university extension, and community centers in the public schools, it might be possible to trace such a connection. But certainly the statement that "the National Social Unit Organization is the latest outgrowth of the settlement movement" would scarcely be

accepted by those familiar with its underlying principles. The author quotes the purposes of the National Social Unit Organization: "to promote a type of democratic community organization through which the citizenship as a whole can participate directly in the control of community affairs, while at the same time making constant use of the highest technical skill available". There is a wide difference between this and the aims of the settlement as most of us know it. The discussion of the National Social Unit Organization's three-year experiment in Cincinnati is altogether too incomplete to tell the story.

While mention is made here and there of certain phases of the mental-hygiene movement, such as the improvement in hospitals for mental disease, special classes in the public schools, special training for feeble-minded persons, and the application of psychiatry to certain phases of social work, yet there is nothing like a satisfactory discussion of the recent progress in mental hygiene or what it means to the problems of social work to-day.

The purpose of the author, as indicated in the title of the book, was of course to direct the light of history upon social work as we know it to-day. Yet it is unfortunate that he did not avoid these glaring omissions by devoting a little more space to the outstanding movements in present-day social work, even if it meant cutting down a little on his historical data. He throws a bright light on a dim picture. Had he made the picture sharper, with the light less bright, we could have seen it to better advantage.

After all, these are destructive criticisms, and it would not be fair to conclude without emphasizing again that the book as a whole is a contribution of real value. It is clear in its language, original and refreshing in its ideas. The author does not hesitate to think fundamentally and to speak frankly on the vital problems of our social order. Any one engaged in social work or interested in the academic phases of the problem will find it stimulating and profitable.

BLEEKER MARQUETTE.

Public Health Federation, Cincinnati.

THE RURAL MIND AND SOCIAL WELFARE. By Ernest R. Groves, with an introduction by Kenyon L. Butterfield. Chicago: University of Chicago Press, 1922. 205 p.

The author states that "this book attempts to analyze in detail the rural social mind for the purpose of emphasizing its significance in our national life. Rural people . . . contribute to modern society attitudes of mind of indispensable value. Not that country people are inherently different from city people. Living in a different environment, they naturally develop characteristic habits of mind. . . .

The psychic contribution of the farming population is indispensable in our social life, for it provides mental qualities which urban people largely lack."

Such is the thesis of the book. The subject is one of great significance, and the book itself is a distinct contribution to the literature of rural welfare. It will be of great value in guiding experimenters in the field of social activities under rural conditions. In so far as such experimenters have neglected to take the psychological factors in rural life into consideration, they have failed. It is undoubtedly true that much rural work has been weak for that reason. Rural ways of thinking are different from urban. Dr. Butterfield states the point clearly in the introduction when he says: "They [the farmers] are not peculiar nor unique, nor inferior—they are just different. They live under different conditions from city people; they think in different terms; they breathe a different atmosphere; they handle their affairs differently—perhaps because they have different affairs to handle. This difference is not a difference in essential human qualities, but merely the effect of environment on inherent traits."

Through eleven chapters the author develops the psychological differences between rural and city folk, which social workers in city and country alike should understand. He deals with such subjects as the social contribution of primitive agriculture; country life and the herd instinct; the instinct of self-assertion; the parental and the sex instincts; fear; pugnacity; curiosity; workmanship; aquisition; play; the country church and the rural mind; and the psychology of rural organization.

"There is no rural psychology comparable to our urban psychology", he says. "This, however, is not because country life is destitute of problems or material for analysis, but merely because the science has relatively ignored the rural environment." He pleads for the assembling of materials for the study of rural psychology which, when brought together, "must considerably influence every undertaking for rural welfare", because "light will necessarily be thrown upon the work of the church and the school and the family".

The book explains the drift to the city from its psychological factors, particularly the herd instinct. "It is the crude, gregarious appeal", he says, "the mere love of crowded streets, not city contact, but city herd life, that steals the values of country-life environment." He pleads for an educational system that will "reveal to men and women in the country the things in their life of real worth".

It is a task of peculiar difficulty to point out the ways in which the instincts of rural people are different from those of city folk on such matters as pugnacity, curiosity, play, fear, parenthood, and

sex. What the author has to say on these subjects is naturally merely preliminary; further collection of material may change some of the tentative conclusions. In the matter of fear, for instance, a vast amount of psychological data is needed to serve as a basis for conclusions. The author gives fear as one of the most impelling instincts in rural life; it is questionable whether or not the data is sufficient at this time for such a conclusion. It would appear that many of the conclusions in the chapter on fear are drawn from pioneer and insecure rural life; they are not true of settled rural regions. The reviewer has made inquiries of many farmers since this book appeared, and his own experience and theirs indicates that in one section at least the instinct of fear is certainly not more developed among rural folk than among city dwellers. The fact is that in large sections "neither locks have they to their doors, nor bars to their windows". They have their own special fears, due to their environment, as also do urban dwellers. They are doubtless more timid and fearful in certain undertakings, such as investments, because they have more at stake and have had less experience. But the presentation of the subject of the fear instinct, as well as that of pugnacity, curiosity, play, self-assertion, sex, and parenthood, forms the scientific basis for the psychology of rural organization.

No one who proposes to do work in the country should fail to make a careful study of this book. "Successful organization", the author points out, "rests upon a basic psychology", and this is true of rural organization as well as of urban. A failure to understand rural psychology is the reason for the slowness of the development of rural organization. The author makes a wise observation when he says: "Organizations cannot be developed in urban offices by people steeped in urban psychology, working for urban objectives, and then be transferred bodily into country sections and forced upon country people, without a high percentage of failure, even though subsidized from the urban center with money, personnel, and enthusiasm."

The book has an excellent bibliography at the end of each chapter. In this it is an excellent handbook of the valuable literature that is developing in the field of social psychology.

JOHN A. LAPP.

National Catholic Welfare Council.

CHARACTER REVELATIONS OF MIND AND BODY. By Gerald Elton Fosbroke. New York: G. P. Putnam's Sons, 1922. 198 p.

Mindful of the fact that Goll contributed much to the science of neuropathology before his intellectual death in the morass of phrenological quackery, one picks up such a book, which assumes to correlate

mind and physiognomy, with some faint stirrings of hope, despite the disappointments and disillusionments of numerous similar books in days past. Such hopes receive some slight encouragement from a first glance; there is a smattering of modern scientific terms, there is a readable preface, there is a commendable emphasis upon the importance of observation.

Close study of the book, however, soon dashes all such hopes in an exceedingly dismal disappointment. There is the merest pretense of clinging to the dicta of scientific procedure; the essentially unscientific nature of the book cries out from every page. Generalization supplants data. The book contains no tables, no proofs, no diagrams, no averages, no composite photographs. It talks much of "nerve tension" and of "qualities of the perceptive mind" and of "the upper and lower brow". There is a mass of sophistry concerning "four degrees of compression" assumed by the brow, representing respectively in decreasing degree the scientific mind, the mechanical mind, the artistic mind, and the credulous mind.

The book is guilty of many inane word salads and logic hashes, such as the following:

"Morals are abstract things. Therefore it is necessary that there be good reflective power to reason out the justice of a particular action, but it is the perceptive region that must be relied upon for a correct premise from which to reason, and for action after a conclusion has been reached."

It is likewise guilty of such elaborations of the obvious as the following: "Upon this premise, which has been tested in thousands of cases, we base the conclusion that the well formed head and face, showing no decided lack of harmony or crudities, is the head and face of the balanced man."

It contains such overt displays of the author's ignorance of common medical knowledge as the statement, on page 11, that in as much as blood tests, although desired by some employers, are objected to by some prospective employees, this method of character analysis from the study of features will obviate the difficulty because "blood conditions and heart reactions of the subject can be nicely gauged by training the powers of observation in this direction". Again, ". . . the blood might appear to be over-thinned, containing too many red corpuscles". Perhaps we should not be too critical, since the layman cannot and does not distinguish between cytology and serology, but the author can scarcely be forgiven his apparent total ignorance of both.

Many technical details in the book might be criticized. The writer cites no authority but himself. He occasionally uses the phrase "it is stated on good authority", and he spends some pages in a sarcastic

criticism of one of his critics without naming him, and cites one authority by referring only to "the university paper". The style throughout is exceedingly tiresome.

The last third of the book is taken up with portraits accompanied by analyses. These analyses would be amusing if they were not so monotonous; they might be stimulating if they were not so wordy. There is no claim that they are accurate. Many portions of them could scarcely help being to some degree accurate—for example, "mental-physical type"; or, "He is very general in his liking for people"; or, again, "He has a decided liking for approbation".

To each analysis is appended what is called "constructive criticism" and some remarks about vocational adaptability. It is rather amusing that a paragraph of the former is in almost every case devoted to the worthy recommendation that the subject procure from *Collier's Weekly*, 416 E. 13th St., New York City, a system of calisthenics called the "Daily Dozen".

Finally—since this is a review for MENTAL HYGIENE—the following paragraphs are cited as indicative of the manifest need for propaganda *in re* mental disease, (leaving grammar out of the question, and without reference to any accompanying lines about "the full emotional eye" and other conceptions):

"Giving way in excess to imaginative dreams or in insanity the same result will be produced in lesser degree.

"Insanity caused by over-use of the perceptive mind or by worry will draw the eye more deeply into the head and the eye will be furtive, extremely active, and almost brilliant in its transparency, which is caused by over-activity of the brain and eye as a result of excess of blood pressure. This type tends to be dangerously treacherous.

"Insanity caused by vague imaginings and over-development of the emotional side will result in the eye becoming even more prominent, with a surface transparency, and this type tends to be uncontrollably violent."

In short, this book is another disappointment in an undeveloped, but much exploited field.

KARL A. MENNINGER.

Central Neuropsychiatric Association, Topeka, Kansas.

THE CAVEMAN WITHIN US. By William J. Fielding. New York: E. P. Dutton and Company, 1922. 372 p.

This book has a title that is somewhat unusual and striking, and it will be an interesting study in psychological advertising to see

whether this title stimulates the curiosity of the reading public to the point where the book becomes one of the psychological "best sellers", or whether it will rather disturb the equanimity of the said public and repel them from the book.

The question of dual personality has been brought before us in many different ways. This book is a very complete presentation of the primitive instincts within us all, and also of our socialized instincts as they exist to-day. The works of many authors have been drawn upon and there is a fairly large bibliography appended to each chapter. There is much in this book that should appeal to the lay reader, and there are many helpful suggestions as to controlling and directing primitive instincts in ways that are constructive and socially acceptable. Many of the unsubstantiated statements of over-enthusiastic psychological investigators have been omitted from the book, and we find comparatively few statements with which those conversant with accepted psychological work could differ.

At times we feel that some of the chapters contain too much material taken almost directly from the works of other authors; and again, in the chapter entitled *The Caveman Sick*, there is a tendency to neglect the importance of physical factors in the causation of psychoses. This same chapter seems to show a failure on the part of the author to profit by the valuable teachings of war experience. There is an unfortunate repetition of the properly tabooed term, "shell shock"; and the statement, "acquired insanity known as dementia", is most ill-advised, as well as misleading. However, these are but minor details, and as a whole the book does not contain many of them. They are only cited to indicate the need of more accurate statements with regard to some medical facts, which will undoubtedly be made in the next edition.

On the whole, the author has given a very comprehensive—possibly a bit too comprehensive—account of the conflicting natures within us—their inception, their development, their conflicts, their defeats, and their supremacy—and has offered many helpful ideas as to the proper guidance and direction of these powerful forces. The layman could hardly gain many misconceptions from this book, and should find much that is constructive and helpful. To the physician in general practice and to many others who come in contact with the problems of adjustment as relating to society, the book will present many points of view that should be distinctly valuable and will give a working knowledge for the understanding of certain individual and group maladjustments.

ARTHUR H. RUGGLES.

Rhode Island Society for Mental Hygiene.

TEACHING TO THINK. By Julius Boraas. New York: The Macmillan Company, 1922. 289 p.

The purpose of *Teaching to Think*, according to the preface, is to indicate practical methods in the ordinary school for the development of the kind of thinking required in everyday life. The sophisticated reader, hardened by much experience with pedagogical logic, is likely not to go beyond this rosy declaration of the preface. For once at least the much disappointed reader is wrong. The book is all it promises and more. It shows specifically and in a way that permits no argument, first, that education at present does not teach pupils to think and is not expected to do so by those who instruct; and, secondly, that education easily could teach pupils to think and by doing so would make instruction worth while. It is an audacious book, for it challenges American complacency. It is the kind of book some of us, looking back upon our own childhood, wish that our teachers might have read.

The following chapter titles suggest the substance of the book: *The Greatest Thing in Teaching*, *Thinking as an Efficient Form of Behavior*, *The Development of Individual Judgment*, *The Development of Initiative in Thinking*, *Thinking and the Solution of Everyday Problems*, *The Development of Skill in Critical Thinking*, *Methods and Tools for Improving the Teacher's Efficiency in Thinking*. The author would have had a better understanding of the problem of thinking had he been more familiar with recent psychology and psychiatry.

What a weary waste of life much of education really is, what a cruel fraud! If the book gets through the academic skin of self-satisfied educators, the author may have the sense of achievement he richly deserves.

ERNEST R. GROVES.

Boston University.

HOW TO CHOOSE AND GET A BETTER JOB. By E. J. Kilduff. New York: Harper and Brothers, 1921. 215 p.

Every year a new crop of young people must go through the process of finding the first job; every year large numbers of men and women are looking for a different job, or a better job; hence the perennial interest in books that claim to give assistance in the search. Within approximately a year three books of a very similar nature treating of this problem have appeared: *Finding Your Job*, by Shidle (Ronald Press Company, 1921); *How to Get the Job You Want*, by Fletcher (Houghton Mifflin Company, 1922); and the present volume, by Kilduff. Their chief difference lies not in their substance, but in their manner. Fletcher's book is full of "pep", "go get 'em", and

"hot stuff" for 450 pages, unduly lengthened by frequent repetitions; Shidle's book is a fairly terse summary of the various sources and methods of finding a job; Kilduff's consists of slightly more than two hundred pages written in a somewhat monotonous strain, but expressive of considerable "common-sense" psychology.

The author of *How to Choose and Get a Better Job* is Professor of Business English at New York University, so it is not surprising that much of his attention is devoted to various forms of letters, both unsolicited letters and letters in answer to advertisements. The letter should perform the four functions of selling: attracting favorable attention, creating desire, convincing, and stimulating action, and the means of attaining this fourfold performance are given in detail by Professor Kilduff, together with illustrative or model letters. The chapter headings are largely indicative of the purpose of the author: *Planning Your Future, Making the Decision, When Circumstances Interfere, How to Go out after the Job, Answering Advertisements, Unsolicited Letters of Application, Advertising for a Position, The Personal Interview*, and the like. In outlining in this simple fashion much of the accepted job-hunting technique, the writer may be of genuine assistance to the young or inexperienced person who has not fully grasped the importance of neatness of letter and of person, of correct spelling and punctuation, and of adopting in approaching the prospective employer a manner that shall be neither too aggressive nor too humble; and the perusal of *How to Choose and Get a Better Job* may save the young man or woman from some of the careless mistakes that are likely to mark the early years of occupation.

In the title, however, and by implication throughout the entire volume, the author strays over into the field of vocational guidance in general. The other two books listed do much the same thing, although their value lies definitely and only in the analysis of the technique of "landing" a job. Kilduff's leaning toward the broader subject is manifested in a little general advice and the adoption of a tone of encouragement and hearty optimism, springing out of the old false psychology that the will is something above and outside of the mechanism of the body by which the mind and the muscles may be whipped up to a desperate industriousness, the reward of which is inevitably Success. The beneficial discipline of poverty is glorified, and hard labor is accounted the golden key that unlocks all doors. Recognition of individual differences and of individual limitations is slight and grudging if it appears at all. Two quotations, preceding Chapters V and VI respectively, illustrate the author's attitude: "There is no secret about success. Success simply calls for hard work." "The slow trotter will out-travel the fleet racer. Genius darts, flutters, and tires; but perseverance wears and wins."

The intricate problems of vocational adjustment are not even hinted at nor is there evident any acquaintance with the growing endeavor to develop vocational guidance upon a sound basis of psychology and sociology; the book, therefore, has no significance for the scientist. As, however, there are such extraordinarily large numbers of individuals who have little or no idea as to how to start out on the search for a position, the volume, through its detailed exposition of job-hunting technique, justifies its existence.

LORINE PRUETTE.

Smith College.

THE INTELLIGENCE OF HIGH SCHOOL SENIORS. By William F. Book.
New York: The Macmillan Company, 1922. 371 p.

In this volume, Professor Book has given much interesting statistical data accumulated in the course of "a state-wide mental survey" of the seniors in Indiana high schools. His presentation of his material is scholarly and exact; he includes chapters on methods—tests used, technique, and the like—as well as tabulations of his findings. In this brief review, there is space only to touch upon some of Professor Book's most suggestive points. As might be expected, he finds a positive correlation between the intelligence rating on the mental tests and success in school. He is, however, puzzled by the fact that the brightest seniors according to the test ratings had never been selected for rapid promotion (acceleration). Indeed, some of these particularly gifted students had been retarded and forced to repeat some of their school work. Professor Book concludes that either the high school fails to recognize its brightest pupils or else that other factors as well as intelligence are necessary to cause a pupil to be chosen by his teachers for accelerated progress.

In this connection we may point out a salient criticism, not of Professor Book's book, but of his plan for a mental survey. A mental survey of school children, whether in high school or the lower grades, that takes into consideration only the intellectual equipment and neglects such vital factors as physical health, emotional reactions, personality make-up, and behavior habits, is exceedingly inadequate in the light of our present knowledge of the psychology of childhood and adolescence. Had Professor Book's survey been made on this broad basis, he might have found the answer to some of the questions that troubled him when he came to summarize his data. It is perhaps unfair to criticize him on this point, however, as he has apparently realized the inadequacy of his method, and will probably conduct his next state-wide survey along broader lines.

However much we may regret that Professor Book did not investigate other sides of the mental life of his high-school seniors than the purely intellectual qualities, we are sure to be interested in his findings in this field. It is worthy of note that although the girls outranked the boys in school work and received the higher marks, the boys rated higher than the girls on the intelligence tests. More girls than boys are accelerated in school progress, however. From the fact that the girls seem to succeed better in their school work than the boys, although the latter are really brighter according to tests, Professor Book concludes that the high-school curriculum is perhaps better adapted to the needs and interests of the girls. He states this conclusion as only tentative, however, which is wise in view of the fact that he has not made a study of the other factors that may enter into the picture.

There is other interesting information concerning intelligence and vocational choice, intelligence and economic status, and the like. A chapter discussing reforms suggested by the results of the survey follows the conventional lines of advocating intelligence tests for the location of feeble-minded children and superior children and the separation of children into class subdivision, and as a basis for vocational guidance.

PHYLLIS BLANCHARD.

Mental Hygiene Clinic, Monmouth County (New Jersey) Organization for Social Welfare.

THE GAIN OF PERSONALITY. By W. Charles Loosmore. New York: E. P. Dutton and Company, 1922. 233 p.

While others have been trying to discover what personality is, this man tells you how to acquire it.

Two hundred and thirty-three pages of truisms, studded with appropriate quotations in prose and verse, written in most ornate style, but growing increasingly tiresome as the reader advances, it can hardly be considered a contribution to psychiatry.

The author has merely constructed a classification of the human virtues, and all of these virtues—charm, force, sympathy, symmetry, optimism, modesty, individuality, sincerity, enthusiasm, sensibility, humor, repose, and the like—we are asked somehow to acquire. The book belongs with Hall's *The Untroubled Mind*, Kipling's *If*, and *The Letters of Lord Chesterfield to His Son*.

HARRY N. KERNS.

Medical Department, U. S. Military Academy, West Point.

THE BELOVED EGO. By William Stekel. Translated by Rosalie Gabler.
New York: Moffat, Yard, and Company, 1922. 237 p.

One of the several books by Stekel that have been translated within the past year. It consists of a series of short essays on such themes as *The Fear of Joy, Doubt, Envy, Impatience*, and the like, in which a psychoanalytical interpretation is supposed to be given. Most of it seems strangely naïve for a man of Stekel's reputation, and when it is not naïve, it is superficial.

PRACTICAL PSYCHOANALYSIS: AN INTRODUCTORY HANDBOOK. By H. Somerville. New York: William Wood and Company, 1922. 142 p.

This is the type of book that in the earlier days of psychoanalysis created so much misunderstanding and difficulty; a book in which what appears to be impossible is arbitrarily stated as "fact"; in which "obvious" deductions, instead of appearing obviously correct, appear obviously incorrect; the type of book that makes the psychoanalyst seem a fool, absurdly credulous, or a trafficker in the obscene. Certainly a poor kind of "introduction" to any subject. On the other hand, for those who have a fairly clear understanding of Freudian principles and a knowledge of how they are derived, this particular book will be found unusually helpful as a brief review of the major tenets.

PLANS AND ILLUSTRATIONS OF PRISONS AND REFORMATORIES. Collected by Hastings H. Hart, LL.D., President of the American Prison Association. New York: Russell Sage Foundation, 1922. 62 p.

This is a collection of plans and illustrations of some of the newer prisons and reformatories, selected with reference to unusual or improved features. The institutions represented include the new Sing Sing Prison, the Wingdale Prison, the Kilby Prison in Alabama, the Westchester County Penitentiary and Workhouse, and several prison farms and reformatories. Short articles by Dr. Hart, Dr. Walter B. James, Lewis F. Pilcher, and others, accompany the plans. Of particular interest are Dr. Hart's tentative plan of a skyscraper jail, designed with special reference to the needs of Chicago, and the plans of the new Sing Sing Prison, which include provisions for the psychiatric study and classification of prisoners.

NOTES AND COMMENTS

District of Columbia

Plans are being formulated for an institution for the care and training of feeble-minded persons in the District of Columbia. For many years bills have been introduced in Congress to establish such an institution, but have failed of enactment. However, in the current appropriation bill, Congress has authorized an expenditure of \$250,000 for this institution.

Georgia

The Georgia Children's Code Commission was created by an act of the 1922 legislature. The duties of this commission are thus defined: "To study the existing laws of Georgia which in any way affect child life; to study conditions of child welfare in the state; to study the laws of other states, and to consult authorities in this and other states, and to draft for presentation to the succeeding legislatures such laws or amendments to the existing laws as will better safeguard the welfare of children in this state."

This commission is to consist of the following ten members, who are to be appointed by the governor for a term of five years: one superior-court judge, one member of the house of representatives, one state senator, and a member or representative from each of the following organizations: Federation of Women's Clubs, State Council of Social Agencies, State Board of Health, State Board of Public Welfare, State Federation of Labor, State Department of Education, Georgia League of Women Voters.

Mississippi

The 1922 legislature of Mississippi granted an appropriation of \$16,000, for each of the years 1922 and 1923, to be used in the eradication, prevention, and cure of venereal diseases in that state. In this connection, the following house concurrent resolution of that assembly may be of interest:

"In consideration of the fact that the state appropriation for the eradication, prevention, and cure of venereal diseases was reduced 20 per cent and that the federal appropriation has been discontinued, making available for the campaign only about 40 per cent of the funds available the last biennial period, and that this sum is absolutely inadequate to make possible the operation of clinics for the treatment of venereal diseases,

"Resolved, by the House of Representatives, the Senate concurring, That it is the sense of the legislature that every hospital receiving aid from the state be expected to treat all indigent patients presenting themselves with venereal diseases; provided that the bureau of venereal diseases furnish such medicines as are necessary for this service and that these institutions render a report to the bureau of venereal diseases of such cases treated in order that proper accounting may be had for the funds expended in the purchase of drugs."

The East Mississippi Insane Hospital received from the 1922 legislature an appropriation of \$60,000, for the erection and equipment of a building for the care of ex-service men. The sum of \$12,370.42 was appropriated to the Mississippi State Insane Hospital, at Jackson, to improve the wards and other facilities for the care of these men.

ANNUAL MEETING OF THE NATIONAL COMMITTEE FOR MENTAL HYGIENE

The Thirteenth Annual Meeting of The National Committee for Mental Hygiene was held at the Hotel Pennsylvania, New York City, on November 9, 1922. A luncheon was served, following which there were informal addresses by Dr. Haven Emerson, New York City; Professor Stephen P. Duggan, New York City; Professor Elton Mayo of the University of Queenstown, Australia; Mr. John J. Carty, New York City; and Dr. Frankwood E. Williams, Medical Director of the National Committee.

Dr. Emerson emphasized the importance of psychiatric education for the general practitioner and urged those who have hitherto subscribed to other public-health activities to lend their support to the mental-hygiene movement as a necessary part of the public-health movement in general. Dr. Duggan gave a résumé of the work of the National Committee in various fields; Mr. Carty spoke of the possibilities of psychiatry from the standpoint of scientific research; and Professor Mayo told of the influence of the American mental-hygiene movement upon foreign countries. Dr. Williams announced the adoption of a five-year mental-hygiene program by Cincinnati, as a result of the mental-hygiene survey recently completed in that city.

The officers of the National Committee were all re-elected—namely, Dr. Walter B. James, President; Dr. Charles W. Eliot, Dr. Bernard Sachs, and Dr. William H. Welch, Vice-Presidents; Mr. Otto T. Bannard, Treasurer; and Mr. Clifford W. Beers, Secretary.

A NEW MENTAL HYGIENE PUBLICATION

Items of news from the field of mental hygiene can no longer be confined to the pages of a quarterly journal. Beginning with Janu-

ary, therefore, The National Committee for Mental Hygiene will issue each month, with the exception of July and August, a publication to be known as the *Mental Hygiene Bulletin*. The frequency of the publication of the *Bulletin* will make it possible to keep those interested informed of the current major activities in the field. Such items of news as have formerly been published in the *Notes and Comments* section of MENTAL HYGIENE will be transferred to the *Bulletin* and *Notes and Comments* will be reserved for the recording of events of a more formal nature such as the digest of legislation, abstract of reports of committees, of organizations, and the like. The *Bulletin* will be edited by Dr. Frankwood E. Williams, with Miss Edith M. Furbush, of the Department of Information and Statistics of the National Committee, as associate editor. There will be a nominal subscription price of twenty-five cents a year.

AN IMPRESSION OF COUÉ

The following letter, recently published in the *Psychoanalytic Review*, has a special interest in view of M. Coué's visit to the United States and the publicity that has attended it:

My dear Dr. White:

I, too, have been quite besieged by inquiries concerning the so-called "New Nancy School", since the publication of Baudouin's book and since it became known that I had visited M. Coué.

Now in so far as the book aims to give an account of what this very genial and honest old Frenchman is trying to do as a healer—since he is not a physician—the book is thoroughly mischievous, since it exaggerates to the point of distortion what is actually being done by Coué. After discussing the book with Coué, I am convinced, and so does he appear to be, that Baudouin's main objective must have been the exploitation of an opportunity to write a book, and Coué rather laughs at the strained and fantastic formulations with the incessant reiterations, "the New Nancy School", that the book reflects.

Personally, I could not get myself to feel that there is anything that is particularly new in Coué's procedure outside of the deliberate attempt that he makes to put over to his patients, either by means of direct lecturing or through hypnoidal suggestions, the various notions concerning the power of mind over matter, the marvels of auto-suggestion, and the like.

I was, on the other hand, thoroughly carried away by the man back of the procedure, whose honesty, lack of affectation, and keen insight into human nature are quite sufficient to account for his success. He is actually doing a tremendous lot of good to countless numbers of

neurotic, intimidated individuals who get from him a decided boost to their morale. Of course the majority of his patients, at any rate the more intelligent ones, come to him filled with a thorough disgust for the current practices of some of the respectable physicians, having been diagnosed to the very limit of ultra-scientific procedure and finding themselves, after it was all over, just about where they started. They are thus quite naturally in a very receptive mood for this new wonder-working approach to their difficulties which Coué succeeds in convincing them they carry within themselves.

I need not tell you, of course, to what extent the setting contributes to this success. Coué lives in a very charming French garden on the Rue Joan d'Arc in the city that has been famous for its psychotherapeutic wonders. The trick of the designation, "the New Nancy School", for which, however, Coué is not responsible, also helps not a little. While he has people coming to him from practically every country in the world, the majority of his patients, at any rate enough to make the setting what it should be, consist of simple French peasant folk with their innate, thorough preparedness for just such an approach to their ailments. I am convinced the thing could not be pulled off in America, certainly not in the manner in which Coué proceeds, the group method of treatment, although I may be wrong in this, since so far as I know it has never really been tried here.

The most interesting of my experiences, however, relate to the manner in which I got in touch with Coué. From reading the book, I naturally got the impression, especially since the phrase "the New Nancy School" was so constantly reiterated in the book, that this enterprise was being carried on in connection with the medical faculty of Nancy, and on arriving there, I went directly to the university. Well, the first professor to whom I addressed myself with the inquiry as to where I could find Professor Coué, nearly took my head off, and I actually believe would have assaulted me right there and then had he not been restrained by his innate French politeness—all of this, of course, because of the serious indignity I perpetrated in thinking, even, that this man Coué was affiliated with the faculty of medicine. He volunteered, however, the information that there was a man somewhere in Nancy who called himself Coué, but that, of course, he could not be expected to know anything about him.

Somewhat surprised at this reception and really wanting to get a look at the medical school, aside from my interest in Coué, I went to see the registrar. He likewise knew nothing about Coué, but looked up the various physicians' registries of France and assured me that no such man ever graduated in medicine in France. We then talked about the present status of psychotherapy at the university, and you

can get some idea of what their attitude is when I tell you that after the death of Bernheim, they banished his book from the library and the students are being protected from any contact with this evil-smelling thing. Is it any wonder that the Coués are having such a fine time of it when the medical fraternity still persists in its vicious stupidity about these matters?

Failing to get any line on Coué at the university—except, of course, to sense what a real thorn in their flesh he is—I wandered out into the market place and approached the first cabby with the question as to whether he knew where a Mr. Coué lived; whereupon he threw up both arms in the characteristic French style, exclaiming: “Ah, M. Coué, he is the greatest doctor in the world! Everybody goes to him! Who does not know M. Coué? If you are sick, monsieur, I am sure he will get you well.”

I imagine that is the kind of reception every one who comes to Nancy to inquire about Coué must receive, and of course half of Coué’s battles are thus won for him. The strangest part of it all is that Coué is honest enough to tell to what extent he appreciates these side issues that go to make for his success.

I saw him treat all sorts of cases, organic and functional, being with him for several days. In a good many of the cases I saw very definite beneficial results, and in a good many others I was more or less convinced that he had started the patients on the road to improvement at any rate.

Of course Coué is thoroughly convinced that all organic conditions, just so they are not acute and immediately threatening to life, can be successfully treated by his method, and he does not make any pretensions whatever at attempting a diagnosis of his case. In many instances the patient brings to him well corroborated and well established diagnoses, since many a doctor has had hold of the case before. His actual procedure is somewhat as follows:

The patients gather in a little house in his back garden, almost a shack, and devoid of furniture except for benches around the walls, in two communicating rooms. I have seen, I think, scores of patients at one time gathered in this garden hut, and Coué going from one to another, conversing very briefly with them about their difficulties and telling them in an offhand fashion that he has had such and such success with such cases, and so forth, after which he picks out some cases that he has successfully treated—and in the gathering there is usually at least one case of that sort—and points the moral to the rest of the patients. The selected patient is given an opportunity to make the most of these experience meetings.

Coué then addresses the crowd on the general principles of suggestion and auto-suggestion, the power of mind over body, and so forth,

telling them, in an offhand fashion and with a very shrewd purpose, to close their eyes while he is lecturing to them. This lecture lasts for about an hour, during which a goodly percentage of the patients fall into some degree of hypnosis. He then strengthens these general suggestions by touching the affected part of the patient and bringing the suggestion more directly home to him. Then everybody wakes up feeling fine, and they are dismissed with the assurance that everything is going to be all right.

Now and then he illustrates the principles of suggestion by picking out the most apparently suggestible of the crowd and making him give actual evidence of the power of suggestion by suggesting to him various disabilities and other tricks of that sort. You see, on the whole it is the same old pack of tricks, only it seems to me carried on by a thoroughly honest old fellow. He is very intelligent, cultured, and rather free from any strong economic motives. A rather unkempt-looking housekeeper distributes pamphlets to the patients upon their dismissal, for which she charges them a franc or so, and that is apparently the only fee the patients are expected to pay, although of course they may pay him all they feel like. But the whole picture impresses one as being rather devoid of the economic bias.

This, in brief, is a general description of my experiences at Nancy. It is a pity, as I have indicated in my review of Baudouin's book in *MENTAL HYGIENE*,¹ that Baudouin has given such a distorted picture of the thing Coué is endeavoring to do, and Coué himself impressed me as being rather annoyed with this ambitious stunt of Baudouin's. He had not seen Baudouin in months, and he knew very little of his whereabouts at the time I saw him.

It seems that Baudouin got his impression of Coué's work in a rather cursory sort of way and was carried away with the urge to write a book.

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Very cordially yours,

BERNARD GLUECK.

LATIN-AMERICAN COMMITTEE FOR MENTAL HYGIENE

At the sixth Latin-American Medical Congress, held in Havana, November 19-26, Dr. Gustavo Riedel, Director General of the State Government Hospital for the Insane, Rio de Janeiro, and professor of biological chemistry in the National Medical Academy of Brazil, proposed that there be formed a Latin-American Committee for Mental Hygiene, to meet in conjunction with subsequent sessions of the con-

¹ Vol. 5, pp. 256-7, October, 1921.

gress. The vote was passed and each Latin-American country will be represented on this committee by two members. The representatives of Brazil are Dr. Riedel and Dr. Juliano Moreiro, director of the National Mental Hospital at Rio de Janeiro.

GENUINE ECONOMY

Governor Alfred E. Smith, in his annual message to the legislature of New York, had the following to say in regard to the responsibility of the state in its care and treatment of patients with mental disease:

"Some years ago the state undertook, as a state function, the care of the mentally disturbed portion of our population. There are approximately forty thousand people to-day in the state hospitals for the insane. The treatment that they are to receive from the state depends entirely upon the interpretation that you put on the word 'care'. If we are simply to lock them in and herd them together until their distress of mind is relieved by death, that is one method. If, on the other hand, we are to care for them properly, put forth our best efforts to provide for their needs medically and otherwise, make the very best effort that we can to effect a cure, provide for their physical comfort, we must make such appropriations for maintenance as will secure the best kind of help in adequate numbers.

"Overcrowding in these institutions is one of the most serious problems confronting the state. I believe that the people want to do everything they can for these unfortunate wards; that the great majority of the people feel that this is an obligation that they should discharge to the very limit of their ability. I, therefore, bespeak your careful attention to proper appropriations for maintenance and a careful study of proposals to add to the existing structures as well as to build new ones of proven necessity in order that we may cure the evil of overcrowding and not overlook the necessity for attendants in adequate number.

"Related to this in a way is the problem of the mentally deficient. On the theory that a stitch in time saves nine, the dollar spent by the state at the right time may save countless dollars later on in the handling of this important problem. With proper housing under proper environment and with proper teaching, the mentally deficient may be made useful members of society to the extent that their condition will permit. Work might well be begun in the schools in extending the system of special classes successfully started, where it is possible at first hand to detect any defective mentality and where in the primary stages some form of training might be useful.

"If the state neglects mental defectives, it may save some money, but it will pay twice as much in the long run in provision for more costly forms of custodial care. In fact, this general principle of proper standards might well be applied to all of our state institutions which care for any group of our dependent wards. They should all be kept at the highest possible standard. If we do this work, let us do it well. If we do it only halfway, we lose as far as results are concerned on even the half that we undertake.

"I will be glad to coöperate with your committees and the officials in charge of our various institutions in working out a program that properly meets these needs."

THE CONTROL OF LIFE

Lewis Mumford, associate editor of *The Dial* and acting editor of the (London) *Sociological Review*, has reviewed in the *New Republic* *The Age of Invention: A Chronicle of Mechanical Conquest* by Holland Thompson (Vol. 37, *The Chronicle of America Series*. New Haven: Yale University Press) and *The Control of Life* by J. Arthur Thomson (New York: Henry Holt and Company). Mr. Mumford chose to review these books together for the reason that the first writer deals implicitly with the physical aspect of a problem that Professor Thomson approaches mainly from the biological side. The first book he discusses but briefly, as "the significance of the Age of Invention to the development of our American civility is lost in a shuffle of dates, biographies, and anecdotes". The two books, however, raise the question, "What instruments can we use for the 'relief of man's estate'?" and Mr. Mumford's discussion is of interest.

"Professor Thomson begins with the Baconian thesis that science is the chief instrument for this purpose, and he attempts to show in terms of present-day biological knowledge the possibilities for development that now open before us. On the subject of heredity, health, and population, Professor Thomson indicates that a good store of knowledge is already available for rectifying the tendencies toward deterioration which are so plain in the modern community. Yet at the conclusion of his excellent survey, the central thesis of *The Control of Life*—'that a new freedom may be reached by bringing more brains, as well as more good will, to bear'—is insidiously withdrawn. 'The application of science', Professor Thomson confesses, 'need not be for good at all; the degree to which it will be for good depends on its congruence with man's organization of ideals. . . . There is obviously nothing evil in machinery or mining as such; there can

be nothing evil in applying science to industry; but the danger of our weak humanity is in allowing practical organization to be dominated by some one-sided ideal such as greed. And, as has been shrewdly said, the reason for the ugliness of the nineteenth-century factory and railway station and "tenement" was the ideal-system of those who built them.'

"Now, the outstanding feature of the Age of Invention was its concentration upon the external environment. Even in its attempt to improve human institutions—and the Age of Invention abounded with a multitude of proposals like those brought before the Mudfog Association, 'for the advancement of everything'—stress was laid upon fool-proof mechanical devices which could be constructed without altering the nature of the people who were going to work them, and without changing the ideal-systems these people might possess. It would be interesting to catalogue side by side the various mechanical and social devices upon which the Age of Invention based its hope for a new world. At the time that Watt was inventing the steam engine, Bentham was drawing up those coda of constitutional reform which he fairly expected to be the pillars of his immortality; and perhaps the parallel could be carried further. In one column would be the power loom, the steam engine, the electric telegraph; in the other, manhood suffrage, the joint-stock company, the eight-hour working day. I do not suggest that any of these inventions are despicable, or that a civil community would be willing to forfeit a single one. What seems to me significant, however, is that our social and mechanical inventions have still left unanswered the central problem in the control of life—what is to control the controller? This looks like a question of ideology rather than technology; and it is still, perhaps, worth discussing.

"By themselves, knowledge and invention leave a human being exactly in the same pickle in which he has been discovered, again and again, by all the great ideologists from Zarathustra to Plato, and from St. Augustine to Nietzsche. Our present existence may be described as a great incontinence of means and a perpetual abortion of ends. The fact that we have split life into two departments, the ideal and the practical, the spiritual and the temporal, is not a proof that the respect for the ideal is a cynical hypocrisy, but that we have lacked, and still lack, a method of integration. One of the reasons for this failure has lain in the fact that our instrumentalities have been concerned chiefly with 'things' and our ideologies with men; and we have been negligent of the necessity for developing a technique which could be applied to human behavior itself. Here, indeed, is the predicament. The Age of Invention contented itself with developing a monumental apparatus for controlling the outer life; while

the small array of devices that existed for controlling the inner life and disciplining the personality remained largely in the hands of deliberate quacks or irrelevant mystics—the Pelmans and the Swedeborgs.

"There is a legitimate challenge to genuine science and philosophy in the personality cults, the theosophists, and the Christian Scientists that have sprung up in recent years. It is possible that these systems have something to teach us about methods of handling the human psyche and developing its powers, even though the foundation of their methods may be scientifically absurd. In response to the genuine needs which these mystic cults attempt to satisfy, let science and philosophy undertake a scrupulous examination of every formulary for conduct, from the Bhagavad Gita down to Mrs. Eddy. Let us criticize this body of data in the light of physiology and analytical psychology; and then let us see what is available for immediate consumption. Doubtless the older ideologies have been unwise in that their demands upon Falstaff and Pistol to live like Christ have kept these biological rascallions from achieving so much as the level of Robin Hood. It is evident, however, that we have been equally stupid in putting into control of our modern political and industrial organization men who are ruthlessly ignorant of human ideals, who are obtuse to the needs of the personality, and who are ridiculously undisciplined to conduct which demands so much as a cubit's reach above the instinctive level. In sum, the Age of Invention awaits, in its attempt to control life, for a discipline which shall control the controller, and for an ideology which will place before the controllers humanly valuable ends. Lacking this, the Age of Invention will probably turn out to be an age of sodden dissipation; and woe to the generation that awakens to the dawn of the morning after!"

THE PSYCHOLOGICAL SIGNIFICANCE OF THE PRE-SCHOOL PERIOD

"The sixth-year molar is a convenient punctuation point in the development of a human being. The eruption of this first permanent molar marks the termination of the early fundamental years of human existence. These are the pre-school years. The next six years bring the child to the teens (and to his second molars), and if he passes through his elementary education at an average rate, he is then ready for a junior high school, which it will take him another six years to complete. At the age of eighteen he may be ready for college and professional training. His wisdom teeth will not have erupted ordinarily until the close of the twenty-fourth year. We have here four periods, each about six years in length.

"In a broad biological sense, these four sexennia constitute the total span of infancy—of physical and mental maturation. It is very easy to underestimate the importance of the pre-school years, particularly their psychological importance. But the very laws of growth make these the most formative of all years. The younger the creature, the more rapid is growth. When measured by percentage of increment in weight and height, the growth activity of the first six years is incomparably greater than that for any subsequent period of six years. The individual begins as a fertilized ovum weighing about half a milligram. By the time of birth the growth has been reckoned by Minot as 5,000,000 per cent. Between the ages of three and four months alone, the fetus increases fivefold. During the first five months of life, the baby doubles its weight. During the first year, there is a total gain of 200 per cent. During the next year, the gain is about 30 per cent. This rate steadily declines until by the age of six the annual increment is only 10 per cent. After six the curve of growth remains almost on a level until puberty, when there is a slight return to the earlier growth intensity.

"Now this relatively enormous physical growth involves almost from the outset the nervous system and 'the mind'. At the beginning of the fetal period, the head, with its developing brain, is in size and bulk about equal to the whole body. At birth the height of the cranium is one-fifth that of the total stature, and by the end of the pre-school period the brain has achieved very nearly its maximum weight. If we can judge at all from these physical facts, the pre-school period must be one of fundamental importance for mental growth and mental organization.

"From the educational standpoint, the conditions of the pre-school period are interesting and challenging. Legally, the pre-school child has no educational status in this country. Compulsory education does not begin to operate in most states until the age of six. The tacit assumption is that it is not an educational period at all. Psychologically, nothing could be more erroneous than such an assumption. In a certain sense the amount of mental growth that takes place in the first sexennium of life far exceeds anything that the child achieves in any subsequent period. Indeed, it may be doubted whether all of his scholastic strides taken together bulk for as much as his brilliant advance from the stage of protoplasmic vegetation at birth to the mastery of physical and personal relations—language, art, and science—that he has attained when he first slings his school bag over his shoulder. This remarkable velocity of mental development parallels the equal velocity of physical growth during these early years.

"The character of this mental development is by no means purely or preëminently intellectual. Almost from the beginning it is social, emotional, moral, and denotes the organization of a personality. The infant is not only acquiring perceptions and motor coördinations, he is acquiring attitudes toward things and persons, prejudices, inclinations, habitual preferences, inhibitions; he is incorporating modes of behavior which do not, of course, constitute a mature personality, but which psychologically are at the core of personality. On every level of behavior, the physiological, the sensori-motor, and the higher psychical, he is acquiring both healthful and unhealthful habits of activity. Though he may not learn to read in the pre-school years, he is mastering the alphabet of life. So potent are these fundamental lessons that this period easily becomes the soil of perversion, inefficiency, and distorted or curtailed development. It is natural that the new genetic psychology places great emphasis upon the influence of infancy over character formation. Psychoanalysis reveals significant instances in which unfortunate experiences in the first years of life were competent to produce abnormal behavior in adults.

"Practically all cases of mental deficiency become established and are recognizable before the age of six. Speech defects likewise. Apparently 80 per cent of cases of stuttering originate before the sixth year.

"Therefore, from the special standpoint of mental hygiene, we are compelled to recognize the importance of the pre-school years; and this standpoint is happily coming to reflect itself in public-health nursing. Nurses are widening the scope of infant-welfare work to include more definitely the mental well-being of their clients.

"I have occasionally found nurses who were under the impression that a mental examination of babies and of toddlers was impossible, and that a child must be old enough to go to school and learn something before one could determine anything regarding his mental make-up. This is the wrong view. The growth of the mind begins with birth itself, and a concern for mental health should begin as early."—Arnold Gesell, in *The Public Health Nurse*.

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